Challenge TB - Indonesia
Year 2

Annual Report

October 1, 2015 – September 30, 2016

October 30, 2016

Cover photo:
The team of Janitors City, usually called as " Orange Team" , participated in TB Day Commemoration 2016, in Marunda slum area, Jakarta. To enter and taken picture in photo booth provided by CTB, they had to fill a questionnare and receive TB education from CTB staff" (Photo by Trishanty Rondonuwu)

This report was made possible through the support for Challenge TB provided by the United States Agency for International Development (USAID), under the terms of cooperative agreement number AID-OAA-A-14-00029.

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List of Abbreviations and Acronyms

APA	Annual plan of action
APBD	*Anggaran dan Pendapatan dan Belanja Daerah* (Local Goverment Budget Plan
ART	Anti-retroviral therapy
ATM	AIDS, Tuberculosis, Malaria
ATS	American Thoracic Society
BBLK/ BLK	*Balai Besar Laboratorium Kesehatan/Balai Laboratorium Kesehatan* (Provincial Health Laboratory)
BPJS	*Badan Penyelenggara Jaminan Sosial* (National Health Insurance Provider/Agency)
BPOM	*Badan Pengawas Obat dan Makanan* (National Drug and Food Control Agency)
BPPM	*Bina Pelayanan Penunjang Medik* (Medical Laboratory Support Services)
BPPSDMK	*Badan Pengembangan dan Pemberdayaan Sumber Daya Manusia Kesehatan* **(**The Agency for Development and Empowerment Human Resource of Health**)**
BSC	Biological safety cabinet
C/DST	Culture/drug sensitivity test(ing)
CBO	Community-based organization
CCM	Country Coordinating Mechanism
CEPAT	Community Empowerment of People Against Tuberculosis
C-GAT	Country GeneXpert Advisory Team
CME	Continuing Medical Education
CPT	Co-trimoxazole Prevention Therapy
CSO	Civil society organization
DAP	District Action Plan
Ditjen BUK	*Direktorat Jenderal Bina Upaya Kesehatan* (Directorate General of Health Efforts)
Ditjenpas	*Direktorat Jenderal Pemasyarakatan* (Directorate General of Corrections)
DM	Diabetes mellitus
DOTS	Directly Observed Treatment – Short Course
EPT	Expert patient trainer
EQA	External quality assurance
FAST	Finding TB case Actively, Separating safely, and Treating effectively
FBO	Faith-based organization
FHI 360	Family Health International 360
FLD	First line drug
GF	Global Fund
GP	General Practitioner
HCW	Health care worker
HDL	Hospital-DOTS linkage
HIV	Human immunodeficiency virus
HRD	Human resources department
IAI	*Ikatan Apoteker Indonesia* (Indonesian Pharmacists Association)
IC	Infection control
IMA	Indonesian Medical Association
INH	Isoniazide
IPT	Isoniazide Prevention Therapy
ISTC	International Standards for Tuberculosis Care
JATA	Japan Anti Tuberculosis Association

JKN	*Jaminan Kesehatan Nasional* (National Health Insurance System/Scheme)
KARS	*Komite Akreditasi Rumah Sakit* (National Committee of Hospital Accreditation)
LMIS	Logistics Management Information System
LQAS	Lot quality assurance sampling system
M&E	Monitoring and evaluation
MDR	Multi-drug resistant
MIFA	Management Information For Action
MoH	Ministry of Health
MSH	Management Sciences for Health
NAP	National AIDS Program
NGO	Non-government organization
NRL	National Reference Laboratory
NSP	National Strategic Plan
NTP	National Tuberculosis Program
NTPS	National TB Prevalence Survey
OR	Operational research
P2PL	Pengendalian Penyakit dan Penyehatan Lingkungan (Department of Disease Control and Environmental Health
PCA	Patient-centered approach
PDPI	*Perhimpunan Dokter Paru Indonesia* (Indonesian Pulmonologists Association)
PLHIV	People living with HIV
PMDT	Programmatic Management of Drug-Resistant Tuberculosis
PNPK	*Pedoman Nasional Pelayanan Kedokteran* (National Guidelines for Medical Practice Standards)
PPK	*Pedoman Pelayanan Klinis* (Clinical Practice Guidelines)
PPM	Public-private mix
PSM	Procurement supply management
PUSDATIN	*Pusat Data dan Informasi* (Center for Data and Information)
Puskesmas	*Pusat kesehatan masyarakat* (Public health center)
QA	Quality assurance
SITT	*Sistem Informasi Tuberkulosis Terpadu* (Integrated TB Information System)
SLD	Second line drug
SOP	Standard operating procedure
SRL	Supranational Reference Laboratory
SSF	Single Stream Funding
SUFA	Strategic Use of ARTs (HIV program priority districts)
TA	Technical assistance
TB	Tuberculosis
TB CAP	Tuberculosis Coalition Assistance Program
TORG	Tuberculosis Operational research Group
UGM	Universitas Gadjah Mada
UHC	Universal health coverage
UI	University of Indonesia
USAID	United State Agency for International Development
WHO	World Health Organization

1. Executive Summary

Indonesia is both a high TB and a high HIV burden country, 2nd rank of top six high TB-burden countries worldwide after India and number one in world for unreported TB patients.
The latest National prevalence survey (2013) shows the prevalence was almost 2.4 times higher than previous estimates. The number of case notification 2016 is 330,729 which means only 33% cases notified from the estimated annual incidence of 1 million cases (NPS 2013). Importantly the MoH now accepts these results as the basis for further planning. The Global TB report 2016 reported an estimated126,000 people died of TB in 2015; MDR-TB prevalence is estimated at 2.8% among new cases and 16% among retreatment cases.

On 14 January 2016, there was a change in NTP leaderships with Dr. Asik Surya MPPM now being the head of TB Control Sub-directorate of the MOH. The new NTP leadership requested a revision of the NTP National Strategy 2015-2019, to better align with the decentralized character of TB control in Indonesia. CTB supported the revision.

In APA 2 CTB Indonesia activities were mainly focused on the CTB objective 1: " Improved access to quality patient centered care for TB, TB/HIV & MDR-TB services" with secondary focus on objective 3: " Stherengthened TB platforms" to ensure the necessary enabling environment (i.e a comprehensive Health Information and Management System (HMIS), political commitment & leadership with adequate allocation of resources (financial, human & material)), required to achieve objective 1. Thus CTB Indonesia in APA 2 aimed to achieve the following 5 sub objectives:

- Sub objective 2: Comprehensive, high quality diagnostics
- Sub objective 3: Patient centered care and treatment
- Sub objective 7: Political Commitment and leadership
- Sub objective 10: Quality Data, Surveillance & M& E
- Sub objective 11: Human Resource development

Challenge TB (CTB) with KNCV as the lead partner and ATS, FHI360, IRD, and WHO as coalition partners, support the Government of Indonesia through the Ministry of Health in the field of policy and guidelines development, and provision of technical assistance (TA) on intervention areas. Division of responsibilities among CTB partners are as follows: KNCV leads overall implementation and focuses on governance and strengthening of political and financial commitment, enhancing case finding and notification, laboratory network strengthening, PMDT, surveillance, and evidence generation; FHI360 on TB-HIV and TB in prisons; WHO ensures that all policies and guidelines are in line with global guidelines and standards, and integration of TB requirements into the health insurance system; ATS on expansion of PPM, and PMDT cohort review; and IRD on eHealth and mHealth.

Through collaborative interventions involving all key players, CTB has achieved the following key results in year 2:

- ✓ **CTB got a buy in from NTP for District Action Planning approach .**
  The CTB approach to elaborate district ownership in TB program through District Action Plan (DAP) approach received a positiveresponse from the NTP. The NTP has included TB district planning as a priority in the National Action Plan for TB Elimination. TB District planning is considered as a manifestation of the local government leadership and commitment to eliminate TB. The NTP agreed and adopted the draft guideline developed by CTB in Q2 2016. Furthermore, Training of Trainers (ToT) was conducted with CTB taking part in the National Facilitators team. Up to September 2016, Provincial level DAP meetings were conducted in 4 CTB provinces and 9 non-CTB provinces.

  In APA 3, related to the above, CTB will support and facilitate capacity building at national and provincial level, using the planning in 6 CTB provinces (16 Districts) as demonstration site.

Besides, CTB will finalized the draft of the national guidelines for comprehensive district planning developed in APA2, using feedback from the CTB districts.

- ✓ **GeneXpert accelerated scale-up from 41 to 82 sites in 33 provinces of Indonesia.**
  CTB provided TA to the NTP for the GeneXpert placement, installation, training for the laboratory technicians and troubleshooting. As part of Programmatic Management of Drug-resistant TB (PMDT) expansion, the NTP has installed 82 GeneXpert machines in 33 provinces (40 of 4-module machines and 42 of 2-module machines) up to September 2016. The 200 machines that were procured with GF budget have arrived and will be installed in October-December 2016, the other 100 machines will be procured at the end of this year and will arrive in 2017. This procurement was part of the acceleration of Global Fund (GF) grant utilization. In addition, NTP also procured 31 machines with domestic budget (*Anggaran Pendapatan & Belanja Negara/APBN*). They are expected to arrive in November 2016 and will be installed in early of 2017.

  CTB will continue the support, on the decentralization, roll out and utilization of GeneXpert platform for MTB/Rif testing and related transportation system. Those plan including the implementation of GxAlert in CTB areas to be scaled up nation wide. As part of Xpert acceleration, on PMDT, CTB wil support expansion and decentralization of the PMDT network and provision of treatment close to the homes of patients by GF funding, which is needed to accomodate the GF rapid Xpert expansion 2016/17.

- ✓ **Two C/DST labs were certified for DST on Second line anti-TB drugs.**
  In APA 1, only 5 C/DST labs in Indonesia provided DST for second line anti TB drugs. With support from CTB, two regional laboratories, BBLK Jakarta (DKI Jakarta) and Adam Malik Hospital (North Sumatera) have been certified for Drug Susceptibility Testing (DST) on second line anti-TB drugs during APA2. It brings the total number of certified laboratories for 2nd line DST in Indonesia to 7, thus achieving the 2016-national target.

- ✓ **Prisons Action Plan signed by the Ministry of Law and Human Rights and CTB.**
  In April 2016, an agreed Prisons Action Plan (work plan) between Directorate General of Correction Ministry of Law and Human Rights (MoLHR) and CTB which outlined CTB's work in prisons, was signed by CTB Chief of Party, FHI 360 Country Director and the Director General of Correction. It covers all agreed work plan activities for 2016-2018, including CTB collaboration with the MoLHR on the implementation of Intensified Case Finding (ICF) for TB, supporting and strengthening linkages so that all inmates can have access to TB, DR-TB and TB/HIV services, developing a post-release program, and articulating an exit strategy for those prisons/DCs, which meet criteria for more independent ICF implementation.

  In APA 3, CTB will focus on the conversion towards locally owned implementation of comprehensive and equitable TB control in prisons including active and passive case TB finding, treatment of all forms of TB in line with national standards, development of prisoners' access to health insurance (training of TWG, MLRH, CTB staff, strategic planning workshop). Patients who need to continue treatment on release will be linked with patient support groups, with pre-and post-release counseling and support, follow-up and validation of treatment results. (MDR-TB satellites).

- ✓ **NTP, US Ambassador and Indonesia famous rockband collaborated in TB Campaign Video.**
  For World TB Day, the NTP, CTB and USAID jointly developed a video campaign, involving the NTP, the US Ambassador, and a famous local rock band-SLANK, to raise public awareness on TB. The video campaign premiere on March 24th in conjunction with US Embassy's youth event "Let's TOSS to End TB" took place in @america corner under the United States Embassy Jakarta in Pacific Place, Jakarta. In this event, the Embassy of the US announced their support to the TOSS TB (*Temukan Obati Sampai Sembuh*, Find Treat and Cure TB) campaign. After the event, the video campaign is now being used by the Jakarta Provincial Office of Health to promote TB awareness on their electronic banner in public places around Jakarta.

Besides, in the Marunda slum area, CTB opened a photo and education booth during the launching of TOSS TB with the ***"Gerakan Keluarga menuju Indonesia Bebas TB"*** (Family Movement towards Indonesia free of TB) campaign by the Minister of Health, which also was attended by the **Governor of Jakarta**- Basuki Tjahja Purnama (Ahok).

- ✓ **National TB Patient Organization (*Persatuan Organisasi Pasien*) established.**
  The national TB patient organization (POP TB) has been established in August 2016 with the 8 patient organizations participated[1], include the newest one; SEKAWANS from Jember. The POP TB aims to provide a platform for the voices of TB patients, represent TB patients in national level discussions and forums, contribute to planning and decision making and to participate in monitoring the implementation of national policies. POP TB also aims to promote and facilitate the establishment of more local TB patient organizations all over Indonesia and to build the capacity of its members.

  In APA 3, community engagement and empowerment will be more extensive. CTB will invest in the development of CSO's "TOSS TB" (*Temukan, Obati sampai Sembuh TB* = Find, Treat and Cure TB) networks at national and provincial level, to prepare effective collaboration at district level planning and implementation through sub-awards to 2 national CSO's. At district level CSOs will also be engaged in monitoring the functioning and utilization of treatment sites, the sputum transportation system and other TB services.

[1] 8 patient group nationwide, they are PETA in Jakarta, REKAT in Surabaya East Java, SEKAWAN in Jember East Java, PANTER in Malang East Java, SEMAR in Central Java, TERJANG in West Java, PEJABAT in North Sumatera, and Kareba Baji in South Sulawesi.

2. Introduction

Country	Indonesia
Lead Partner	KNCV Tuberculosis Foundation
Coalition Partners	ATS, FHI360, IRD, WHO
Resource Partners	UGM (Gadjha Mada University), SA Pathology (SRL Adelaide)
Local Partners	
Country Director name and email address	Agnes Gebhard agnes.gebhard@kncvtbc.org
Period of performance	October 2015 – September 2016
Total obligated amount for Year 2	US$ 8,160,000
Estimated Pipeline from Year 1	US$ 2,881,358
Total budget available for the Year 2 work plan	US$ 11,041,358
Cumulative total obligated from project start	US$ 15,610,000

Indonesia is the largest archipelago in the world with 17, 504[2] islands, with total area 1,910,931 km2 and rank 4th largest of population; 255,182,144 people[3]. The country consists of 34 provinces, 514 districts/municipalities, 7,094 sub districts, 8,412 kelurahan (urban village) and 74,093 desa (rural villages)[4]. These figures represent the potentials and challenges, due to goverment decentralization mechanism and uneven population distribution between urban and rural (47% of the population live in rural areas).

Global TB 2016 reported that Indonesia is one of top six high TB-burden countries worldwide with 330, 729 TB cases notified in 2015 and number one in world for unreported TB patients (680,000). The latest National prevalence survey (2013) shows the prevalence was almost 2.4 times higher than previous estimates. The number of prevalent cases is estimated at 1.6 million (0.65% of the general population) with an estimated annual incidence of 1 million cases. Each year around 100,000 people die of TB. MDR-TB prevalence is estimated at around 2.8% among new cases and 16% among retreatment cases. The HIV epidemic is categorized as a concentrated epidemic in key populations, and a generalized epidemic in Papua Island (2.4% of population). Importantly, the MoH now accepts these results as the basis for further planning.

On 14 January 2016, there was a change in NTP leadership, with Dr. Asik Surya MPPM succeeding Dr. Christina Widaningrum M.Kes as director of the TB Control Sub-Directorate of the MoH. The titles and functions of sections in TB Control Sub-directorate also changed, following Presidential Regulation No.35/2015 on the Ministry of Health's structure reorganization. The new officers needed a program update, which slowed the speed of implementation. Moreover, the new NTP leadership requested a revision of the NTP National Strategy 2015-2019, to better align with the decentralized character of TB control in Indonesia. CTB supported the revision.

In APA 2 CTB Indonesia activities were mainly focused on the CTB objective 1: " Improved access to quality patient centered care for TB, TB/HIV & MDR-TB services" with secondary focus on objective 3: " Strengthened TB platforms" to ensure the necessary enabling environment (i.e comprehensive Health Information and Management System (HMIS), political commitment & leadership with adequate allocation of resources (financial, human & material)), required to achieve objective 1. Thus CTB Indonesia in APA 2 aimed to achieve the following 5 sub objectives:

1. Sub objective 2: Comprehensive, high quality diagnostics

[2] Badan Informasi Geospasial, 2014
[3] Result of the 2015 Intercensial Pupulation Survey, Badan Pusat Statistik.
[4] Home and Internal Affairs Ministry of Indonesia, 2015.

2. Sub objective 3: Patient centered care and treatment
3. Sub objective 7: Political Commitment and leadership
4. Sub objective 10: Quality Data, Surveillance & M& E
5. Sub objective 11: Human Resource development

Lead and collaborating partners

During APA 2, CTB interventions in Indonesia were implemented through KNCV with assistance from two in country coalition partners (FHI360 for TB/HIV and prisons, and WHO for national policy and guidelines). KNCV is also supported,by short-term technical assistance from two external coalition partners ATS and IRD, with IRD having one staff hosted by the KNCV office The coalition speak with one voice to NTP, USAID/ Mission, and dialogue among stake holders, through the lead coalition partner, KNCV.

Table 1. Challenge TB Indonesia coalition

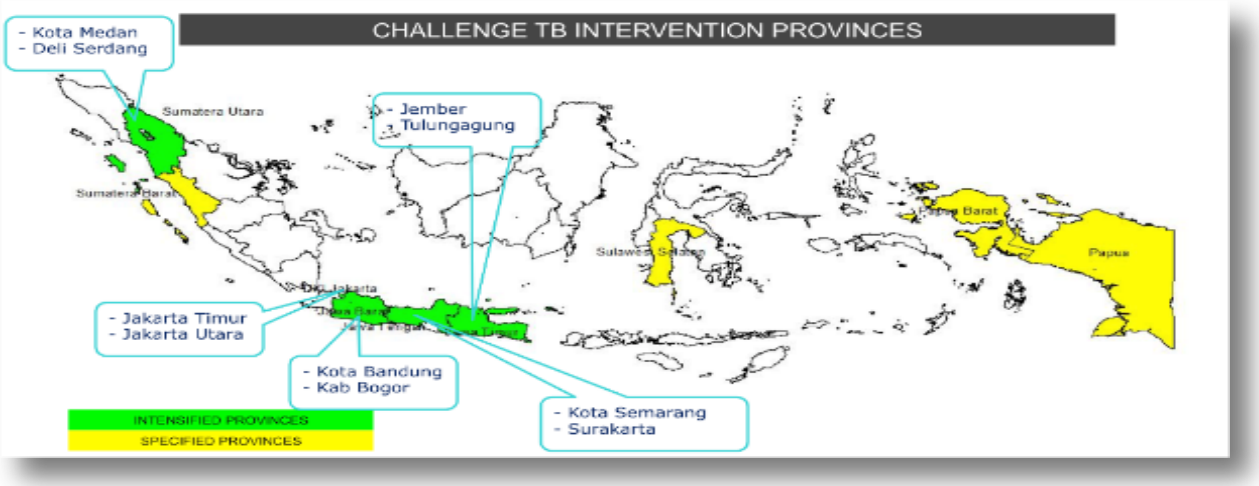
Coalition Partners	Main Roles & responsibilities
KNCV	Led the overall technical assistance to NTP and other stakeholders, ensuring a comprehensive program. Led the project management, including: implementation of agreed work plans and budgets, supervision, review progress and reporting
FHI360	Through a national technical team implemented the agreed work plans in the area of TB-HIV and prisons
WHO	Ensured the development of national policies and guidelines are in line with global guidelines and standards. WHO did not have any direct implementation responsibilities.
ATS	Technical Assistance for expansion of cohort reviews by expert committees and implementation of the Core Research project on transmission. Assistance in an advisory role for engagement of professional societies (based on previous PPM experience in Jakarta, which was successfully handed over to the PDPI during 2015) in CTB provinces and ensuring national guidance was aligned with project goals.
IRD	Technical Assistance for development of a landscape analysis and strategic framework for a new national TB HIS strategy and whole data solution; support for implementation and change management of e-Health and m-Health. Furthermore, IRD has developed a mobile software application in support of the mandatory notification regulation, which will facilitate and ease private sector reporting into the mainframe.

Geographical Areas

At national level, CTB provided Technical Assistance to the Directorate of CDC of Ministry of Health as the main beneficiary/ partner. Additional recipients of TA include other MoH Directorates such as BUK (Medical Services), BPPM (Medical Laboratory Support Services), Binfar (Directorate General of Pharmaceutical and Medical Devices) and Provincial/District Health Offices and local partners in all prioritized provinces.

At provincial level, CTB focusses on five priority provinces, selected on the following criteria: (1) Large provinces prioritized by NTP with high burden of TB and HIV; (2) USAID Indonesia priority provinces as indicated in the 2014-2019 Cooperative Development Country Strategy (CDCS); (3) building on work done to date; (4) presence of other USAID partners to increase synergy. These provinces have small provincial offices to facilitate coordination of intensified assistance and oversee implementation at (sub) district level. In order to define sustainable solutions and best comprehensive approaches for expansion, CTB has implemented a limited set of interventions and scale up at the district level in the five priority provinces through an ''intensified'' package of TA. During APA1 CTB has selected 10

Figure 1. Challenge TB Geographic Areas



districts in these "intensified" provinces (2 districts per province). In these priority provinces, CTB will support all 5 technical intervention areas. CTB has selected 10 districts in these ''intensified'' provinces (2 districts per province) as showed in figure 1.

See below the profiles of 10 intensified districts (Table 2).

Table 2. Ten Intensified Ditricts profile

Province	District/City	Total Population in 2014	Number of HIV cases in 2015[1]	Cumulative number of AIDS patients up to and including 2015[1]	Number of notified TB cases (all form), 2014	Number of notified TB cases (all form), 2015	% from private facilities (2015)	% from public non-NTP facilities (2015)	% from public NTP facilities (2015)	Number of community health centers (puskesmas)[3]	Number of (public/private) hospitals providing DOTS for TB[3]	CNR/100,000 persons (2014)	Number of confirmed MDR-TB cases in 2015*	Starting MDR TB treatment*
North Sumatera	Deli Serdang	1,865,695	117	117	2885	2990	15	7	79	34	5 (1/4)	155	121	121
	Medan city	2,185,789	1,084	3,318	5776	6696	32	24	45	39	30 (7/23)	276		
DKI Jakarta	East Jakarta	2,841,728	974	410	6,109	7,534	20	44	36	88	25 (13/12)	253	490	359
	North Jakarta	1,735,968	517	119	2,890	2,306	15	50	35	49	12 (2/10)	181		
	Central Jakarta	952,525	1,512	182	4,260	4,129	19	56	26	42	13	421		
	South Jakarta	2,175,400	810	191	4,712	3,541	22	23	56	78	17	227		
	West Jakarta	2,407,170	882	223	3,476	5,007	12	38	50	75	12	159		
West Java	Bogor district	5,131,798	121	26	7738	8274	4	30	66	101	7 (6/1)	157	376	264
	Bandung city	2,575,478	654	2,108	7087	7083	31	34	35	73	15 (5/10)	295		
Central Java	Semarang city	1,575,068	370	380	2613	2978	21	30	49	37	15 (7/8)	158	207	161
	Surakarta city	505,461	325	591	1492	1736	29	18	53	17	9 (3/6)	283		
East Java	Jember	2,398,252	695	812	3151	3126	0	1	99	50	2 (2/0)	131	296	214
	Tulung Agung	1,017,972	307	460	832	817	5	38	57	31	6 (2/4)	82		

* *MDRTB data includes the whole province*

3. Country Achievements by Objective/Sub-Objective

Objective 1. Improved Access

Sub-objective 1. Enabling environment1. Enabling environment1. Enabling environment

The key results related to sub objective 1 indicators are also represented in sub objective 7.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	**Y2**
1.1.1.	Percent of notified TB cases, all forms, contributed by non-NTP providers (i.e. private/non-governmental facilities)	Description: Proportion of TB cases (all forms) reported by non-NTP providers (i.e. private/ non-governmental facilities) Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: Number of all TB cases (bacteriologically confirmed + clinically diagnosed; includes new & relapse cases) reported by non-NTP providers in the past year. Denominator: Total number of TB cases (bacteriologically confirmed + clinically diagnosed; includes new & relapse cases) reported by both NTP and non-NTP providers in the past year	National Baseline 1. Non NTP-Public = 57,586/322,806 (18) (2014) 2. Non NTP-Private= 28,186/322,806 (9) (2014) 10 CTB District: 1. Non NTP-Public = 10,553/40,577 (26) (2014) 2. Non NTP-Private= 7,136/40,577 (18) (2014)	10 CTB District 1. Non NTP-Public = 28% 2. Non NTP-Private= 19%	10 CTB districts (2015) • Non NTP Public: 30% (12,936/ 43,762) • Non NTP Private: 19% (8,173/43762) 10 CTB districts (APA 2: Oct 2015-June 2016) • Non NTP Public: 31% (10,282/33,396) • Non NTP Private: 19% (6,300/33,396)
1.1.4.	# of providers (stratified by private, public, military, prison, etc.) certified to provide TB services	Description: Number of all providers (stratified by private, public, military, prison, etc.) certified to provide TB services Indicator Value: Number Level: National Numerator: Number of all providers certified for TB services	10 CTB District (2015) = 668; i.e. : - NTP providers (PHC & Lung Clinics) = 520 - Public Hospitals = 46 - Private Hospital= 82 - Prison = 20	685	10 CTB District (2016)= 677 - NTP providers (PHC & Lung Clinics) = 522 - Public Hospitals = 52 - Private Hospital= 83 - Prison = 20

Sub-objective 2. Comprehensive, high quality diagnostics2. Comprehensive, high quality diagnostics2. Comprehensive, high quality diagnostics

Strategy

Case detection through quality assured bacteriology was an important focus of CTB interventions during APA2. To notify more cases, the ICF approach (SO 3) not only required new algorithms and targeting of high risk populations, but importantly, the availability and use of rapid molecular tests such as GeneXpert. CTB therefore facilitated maintenance of earlier placed Xpert machines, assisted the placement of 82 machines and provided TA to the procurement and placement preparations (planning, training and liaising with the local service provider) of an additional 300 Xpert machines through the reprogramming budget of the Global Fund grant to Indonesia

Besides Xpert, quality assurance for C/DST labs are part ofCTB focus during APA2. Technical assistance, panel test provision and facilitation for labs candidate was delivered, resulting in 2nd line drug certification for twoC/DST labs . Based on the specimen transport network model created by USAID-Deliver/ JSI project, CTB supported DHO to develop locally appropriate sputum transport mechanisms in 7 districts with an additional 3 having been assessed. These will be further supported to improve their systems during APA3, after further discussion of possible solutions to their problems

In general, during APA 2, CTB strategic approaches are to improve EQA implementation for sputum smear, culture and DST, finalize the National Lab Action Plan, and support Xpert expansion

To implement SO 2, CTB collaborated with several key partners, including: the Quality and Accreditation Sub Directorate of theMoH , 3 National Reference Laboratories (Microbiology UI, BLK Bandung and BBLK Surabaya) and the Supranational Reference Laboratory inAdelaide, Australia.

Key Results

Two C/DST labs were certified for DST on Second line anti-TB drugs.

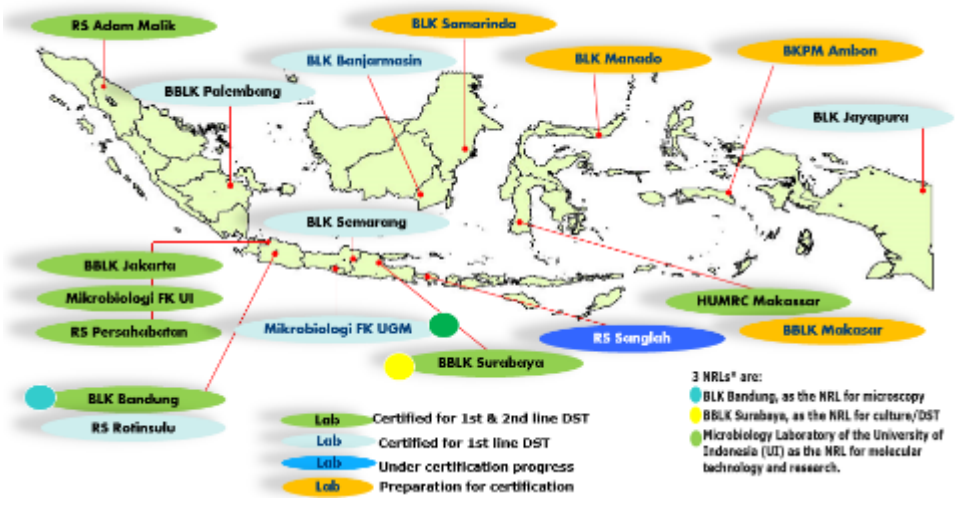
In APA 1, only 5 C/DST labs in Indonesia provided DST for second line anti TB drugs. With support from CTB, two more regional laboratories, BBLK Jakarta (DKI Jakarta) and Adam Malik Hospital (North Sumatera) were certified for Drug Susceptibility Testing (DST) on second line anti-TB drugs during APA2. It brings the total number of certified laboratories for 2nd line DST in Indonesia to 7, thus achieving the 2016-national target (Table 3)

Table 3. NTP target for number of C/DST labs in Indonesia (2015-2019)

	2015	2016	2017	2018	2019
Culture	**16**	**20**	**30**	**40**	**46**
DST 1st ln	**12**	**13**	**14**	**15**	**17**
DST 2nd ln	**5**	**7**	**10**	**13**	**17**

CTB supported these C/DST labs with supervision and training on safe working practice and C/DST. To ensure quality of phenotypic DST in Indonesia CTB facilitated DST panel testing: the SNRL provided the panel strains to the NRL, from which the NRL developed isolates for panel testsing for all DST labs Indonesia (figure 2). Certification of the two additional

Figure 2. Mapping of C/DST labs in Indonesia



regional C/DST laboratories opened wider access to DST for second line anti TB drugs, and leads to faster results.

GeneXpert expanded into 33 provinces of Indonesia

As part of Programmatic Management of Drug-resistant TB (PMDT) expansion, the NTP has installed an additional 82 GeneXpert machines in 33 provinces (40, 4-module machines and 42, 2-module machines) as ofSeptember 2016. CTB provided Technical Assistance (TA) to the NTP for the placement and installation of these GeneXpert machines, training for the laboratory technicians and troubleshooting. Over the fourth quarter of APA2, seven provincial Xpert teams were trained in preparation of the massive scale-up of Xpert testing planned for the last quarter of 2016 and 2017:

In addition, 200 machines, procured with GF budget, have arrived in the country and will be installed in October-December 2016, another 100 machines will be procured end of this year and will arrive in 2017. This procurement was part of acceleration of Global Fund (GF) grant utilization. NTP also procured 31 machines with domestic budget (*Anggaran Pendapatan & Belanja Negara/APBN*). They are expected to arrive in November 2016 and will be installed in early 2017.

Table 4 GeneXpert Acceleration from 2015 to 2017

	2015	2016	2017
Existing installed machines	**62**		
Expansion Plan (local budget, GF, others)		**334**	**100**
Total	**62**	**354**	**100**

CTB participated in the preparation of the placement criteria and plan for the new GeneXpert machines. CTB also participated in the development of a plan for on-site training at provincial level and set up two weekly routine coordination meetings between NTP, NRL- Microbiology UI, CTB, and Medquest (Cepheid's authorized service local provider). The results till now are a training curriculum and on-site training schedule, identification of provincial trainers (who will facilitate the GeneXpert workshops) and plans for the development of an SOP and poster on calibration.

Inline with the increased number of GeneXpert machine, CTB initiated the use of use GXalert (explained in SO.10) to improve notification, monitor utilization and to streamline maintenance and supply chain management.

National Laboratory Plan developed

CTB provided Taby Richard Lumb from SRL Adelaide and Petra de Haas for the development of the National Laboratory Plan 2015-2019. This document was developed in alignment with the National Development Policy 2015-2019, the Ministry of Health Strategic Plan 2015-2019, and the Global and Regional Strategies. It consists of vision and mission; background information; situational analysis; strategic issues of TB Laboratory in Indonesia; Strategy, Indicators and Targets; Budgets; and annexes. The final draft of the National Laboratory Plan was submitted to the NTP in February 2016 for incorporation in the revised National Strategic Plan. However, during the April GF country team mission additional funding for Xpert scale-up became available and the Xpert section was revised. A pre-final version is being finalized based on recalculations of the need for cartridges by a lab consultant as required by the GF country team. The final draft is expected in October 2016.

Specimen transport system implemented

CTB provided TA to the establishment of specimen transportation in CTB areas in close collaboration with and based on the model developed by the USAID-Deliver project by John Snow Inc (JSI). CTB assisted in the evaluation of the piloting, and the development of Specimen TB transportation guidelines.This system transports specimens for TB Lab examination with GeneXpert, culture and DST by referral laboratories. This is important to ensure that TB

presumptive sputum samples arrive and can be examined at the Xpert site. So then TB cases can be notified and get standardized treatment to reduce their infection transmission risk.

The status of implementation is varied, as shown in table 5. As part of Xpert expansion, in APA3 CTB plans to ensure full access to Xpert testing, etc. for eligible patients, based on operationalization of the transportation system.

Table 5. Specimen transport implementation in 10 CTB districts

Name of Districts	Specimen transport mechanism available	Specimen packaging training	Remarks
Medan City	√	-	Not fully implemented, patients still referred directly to Xpert site (RS Adam Malik)
Deli Serdang	√	-	
North Jakarta	√	Video tutorial	3 Pick up points (PUP's) have been identified during TB REACH project by PT Inovasi Sehat Indonesia (PT ISI). Improvement of the transport system is needed
East Jakarta	√	Video tutorial	
Bandung City	√	Video tutorial	
Bogor	√	Video tutorial	
Semarang City	√	√	2 methods of specimen transportation: - directly to Xpert site (RS Kariadi) - through 3 PUP (PKM Gayamsari, PKM Purwoyoso, dan RS Panti Wilasa Citarum)
Surakarta City	√	√	The health facility sends the specimen directly to the Xpert site (RSUD Dr. Moewardi).
Tulung Agung	√	√	The health facility sends the specimen directly to Xpert site (RSUD Tulung agung). There are 37 facilities which have trained their analist staff member in the management of the specimens. The cost of packaging and transportation is funded by the facility it self.
Jember	√	√	The specimen transport mechanism is just developed, and is planned for roll out in October 2016, funded by GF. There are 3 PUP in Jember (PKM Bangsalsari, PKM Pakuasri, and RSP Jember)

To maintain the quality of sputum following IATA standardization during delivery, CTB has developed a video tutorial on specimen packaging. The video has been disseminated through media online (YouTube, CTB facebook Fan page and CTB–Indonesia website) and shared with CTB areas and NTP.

Roadmap for adoption of the Standardized Drug Susceptibility Test Package developed

CTB has provided technical assistance to NRL BBLK Surabaya and NTP in developing the roadmap for Standardized Drug Susceptibility Testing. The roadmap is important as an implementation plan to modify the current First Line and Second Line DST approach and replace with a Standardized DST Package (SDP) consisting of 5 drugs (INH, OFX, MFX, KAN & CAP) for all confirmed RIF Resistant cases.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	**Y2**
2.1.2.	A current national TB laboratory operational plan exists and is used to prioritize, plan and implement interventions.	Description: This indicator measures whether or not a country has a defined TB laboratory operational plan (work plan) within the larger National TB Strategic Plan or National Laboratory Strategic Plan. The country and partners use the operational plan to design and implement priority activities to strengthen TB diagnostic services and the network for TB control. Indicator Value: Score based on the following: 0= Operational plan not available 1= Operational plan available 2= Operational plan available and follows standard technical and management principles of a quality work plan required for implementing the necessary interventions to build and strengthen the existing TB laboratory network (reference: "Practical Handbook for National TB Laboratory Strategic Plan Development"; http://www.stoptb.org/wg/gli/assets/documents/Lab_Strategic_Handbook.pdf) 3= Operational plan available and meets annual implementation targets	0= Operational plan not available (2015)	2= Operational plan available and follows standard technical and management principles of a quality work plan required for implementing the necessary interventions to build and strengthen the existing TB laboratory network	1= Operational plan available
2.2.2.	#/ of laboratories showing adequate performance in external quality assurance for smear microscopy	Description: Performance of EQA is just as important as having EQA established. This indicator measures the percent of laboratories enrolled in EQA for smear microscopy that successfully passed EQA in the last reporting period. Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: Number of laboratories that successfully passed EQA for smear microscopy Denominator: Total number of laboratories enrolled in EQA for	121/162 (75%) (2014)* * Only 5 districts provide the data.	100%	75% (154/206) (2015)

		smear microscopy			
2.2.4.	#/ of laboratories showing adequate performance in external quality assurance for DST	Description: Performance of EQA is just as important as having EQA established. This indicator measures the percent of laboratories enrolled in EQA for culture/DST that successfully passed EQA in the last reporting period. Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: Number of laboratories that successfully passed EQA for culture/DST Denominator: Total number of all laboratories enrolled in EQA for culture/DST	National: 8/11 (73) CTB Geographical Areas: 5/7 (72)	CTB geographical areas:100%	2015 National: 100% (13/13) CTB Geographical Areas: 100% (8/8)
2.2.6.	Number and percent of TB reference laboratories (national and intermediate) within the country implementing a TB-specific quality improvement program i.e. Laboratory Quality Management System (LQMS).	Description: This indicator measures the percentage of TB reference laboratories in the country that are implementing a quality management system for continuous improvement of all aspects of laboratory operations to assure accuracy and reliability of testing, disaggregated by national and intermediate levels. Provide a score/rating for every reference laboratory implementing LQMS, either the "GLI Stepwise Process towards TB Laboratory Accreditation" (scoring = phase 1-4) or SLIPTA/SLMTA for TB (scoring=stars 1-5). Indicator value: Number and percent (Reference: Laboratory Quality Management Systems Handbook; http://www.who.int/ihr/publications/ lqms/en/) Numerator: Number of TB reference laboratories implementing a quality improvement program Denominator: Total number of TB reference laboratories in the country Level: National and/or Intermediate	0/3 (0) (2014)	1/3 (30%)	0% (0/3) (2015)
2.2.7.	Number of GLI-approved TB microscopy network standards met	Description: This indicator measures whether or not a country has met the 11 GLI-approved standards for the TB microscopy network. A CTB checklist is provided to assess fulfilment of the requirements for each standard. Identify numerically (1-11) which standard(s) have been met. (Reference: "TB Microscopy	4 standards met (No: 2, 3, 6 , 11)	11 standards met	7 standards met (No: 1, 2, 3, 4, 6, 9, 11)

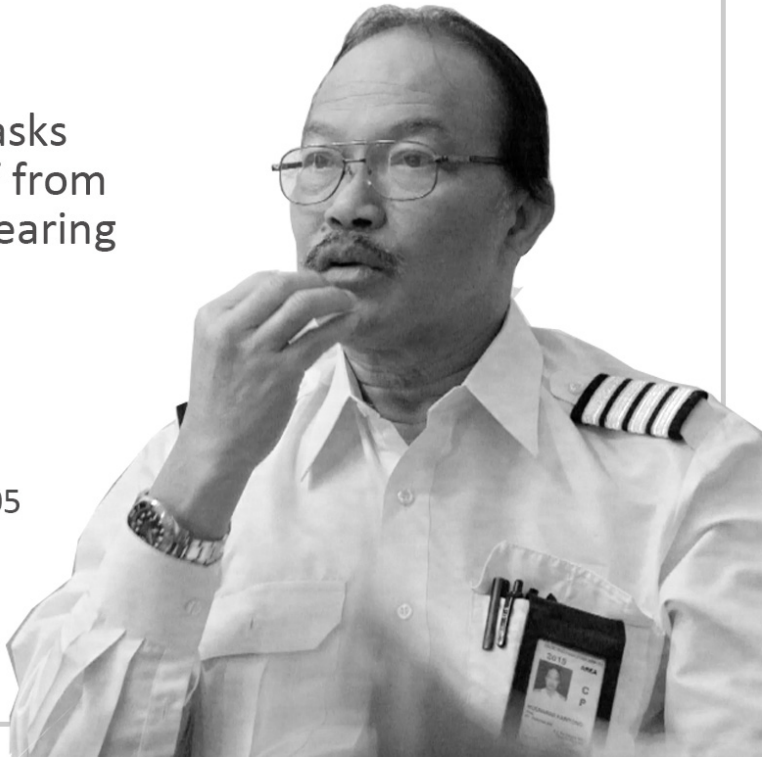
		Network Accreditation: an assessment tool"; http://www.who.int/tb/laboratory/ microscopy-network-accreditation-assessment-tool.pdf) Indicator value: Number Numerator: Total number of standards met (NE=not evaluated, 0=no standards have been met).			
2.3.1	Percent of TB cases tested for RR-/MDR-TB	Description: This indicator measures the percentage of bacteriologically confirmed TB cases that are tested for drug resistance and also have results recorded in the TB register (disaggregated by new and previously treated cases). Drug resistance testing includes phenotypic (culture DST) and genotypic (molecular DST by GeneXpert, LPA or other molecular technologies). Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: Number of bacteriologically confirmed TB cases that are tested for drug resistance and have results recorded in the TB register. Denominator: Total number of bacteriologically confirmed TB cases notified during the reporting period	13% (2,586/19,582)	15 %	(2015) 10% (2,150/21,341)

"... I did feel my TB symptoms were resolved awith medication, but maintaining blood sugar is truly difficult. I feel like I've been very careful with my diet, but my blood sugar keep going up or down..."

Mr. Suroso Yudho
69 years, Father of five
Diabetic Patient
completed TB treatment in 2012

"... I had to wear masks and distance myself from my grandchildren, fearing that they will catch my illness..."

Capt. Moh. Kabiyono
63 years, Helicopter Pilot
Diagnosed with DM in 2005
and with TB in 2014



Sub-objective 3. Patient-centered care and treatment3. Patient-centered care and treatment3. Patient-centered care and treatment

The Country notified only one third of the estimated TB incidence (1 million cases, NPS 2013). Besides strengthening passive case finding and notification especially at Puskesmas level and by the private sector, the NTP's strategy is to find the undefined and undetected cases through active and intensified case finding (ICF). CTB provided TA to develop, review and update the policy and guidelines on TB ICF approaches for various levels of service and to develop a roadmap for ICF implementation, including developing ICF strategies for childhood TB, TB DM, TB HIV and TB in prison system.

Related to TB-HIV and TB in prison CTB focused on strengthening several core activities to ensure comprehensive, high quality care for TB-HIV patients through: provider-initiated HIV testing of all TB patients primarily at the TB facility, referral of all HIV-positive TB patients for early initiation of ART, improved TB screening among people living with HIV (PLHIV), promotion of GeneXpert for TB diagnosis and introduction of Isoniazid Preventive Therapy (IPT).

To implement SO 3, CTB worked collaboratively with several key partners including: professional organizations, Quality and Accreditation Sub Directorate-MoH, Diabetics Sub Directorate-MoH for TB-DM collaboration, Ministry of Law and Human Rights (MoLHR) for TB in prison, National AIDS Program-MoH for TB-HIV collaboration and patient groups for PMDT implementation.

Key results:

Intensified Case Findings

- TB-HIV

a. TB screening among PLHIV

During the program monitoring visits in APA2 to 10 health facilities in CTB districts, the CTB team found that 92% of PLHIV visiting nine ART hospitals were screened for TB. Three of those ART hospitals kept complete records of TB screening, reporting presumptive TB in 1%-3% of PLHIV in the HIV care setting.

The result of TB screening among PLHIV in 2015 in CTB provinces in Table 6 below indicates that DKI Jakarta has room for improvement. The team will focus extra efforts in DKI Jakarta during APA3 to help improve the situation. Data is not yet available for 2016 from NAP.

Table 6. Percentage of PLHIV screened for TB by province

No.	Province	# PLHIV visited HIV care (Dec-2015)	# PLHIV screened for TB (Dec-2015)	%
1	Sumatera Utara	2,887	2,229	77%
2	DKI Jakarta	18,061	6,434	36%
3	Jawa Barat	6,186	4,437	72%
4	Jawa Tengah	3,845	3,374	88%
5	Jawa Timur	7,989	6,191	77%

b. Known HIV status among TB patients

In the 10 CTB districts, the number of TB patients with known HIV status slightly increased from the previous year. The target of HIV testing among TB patients for APA2 of 25% was reached by 4 districts in two quarters of 2016. However, 6 districts need more intensive support to help reach this target. Overall, the program reached only 17% of TB patients with HIV testing (table

8). As this is the gateway to comprehensive HIV care, support and treatment, CTB will concentrate efforts on improving HIV testing rates in 2017. Hence, the CTB team has decided to engage PITC champions to support clinicians in the TB sites to improve this important indicator.

c. ART among TB-HIV patients during TB treatment

Despite striving for 100% timely ART initiation for all TB-HIV patients in APA2, only 25% of TB-HIV patients actually received ART. Discussions are ongoing with the NAP to ensure availability of HIV tests in TB treatment centers and ARV's for co-infected TB patients, in order to ensure significant scale-up under APA3, one of the 5 CTB priority indicators.

Table 7. Number and percentage of TB patients known their HIV status and receiving ART among TB-HIV patients, 2015 – 2016

Districts	Year 2015						Year 2016 (Q1-2, updated up to Oct 16)					
	# TB Patients	Known HIV status		TB-HIV	Received ART		# TB Patients	Known HIV status		TB-HIV	Received ART	
Medan	6,696	731	11%	169	1	1%	2,474	233	9%	95	52	55%
Deli Serdang	3,008	5	0%	5	1	20%	1,491	255	17%	6	0	0%
Jakarta Timur	7,438	1,308	18%	219	45	21%	4,154	695	17%	116	30	26%
Jakarta Utara	2,512	270	11%	116	14	12%	1,224	29	2%	19	6	32%
Kota Bandung	7,250	648	9%	93	10	11%	4,279	339	8%	38	7	18%
Bogor	8,246	358	4%	9	1	11%	3,842	234	6%	3	1	33%
Kota Semarang	2,968	729	25%	106	38	36%	1,351	496	37%	33	17	52%
Kota Surakarta	1,754	614	35%	24	15	63%	758	297	39%	13	5	38%
Jember	3,098	1408	45%	29	15	52%	1,583	649	41%	19	8	42%
Tulungagung	792	316	40%	28	4	14%	407	170	42%	13	2	15%
Total	**43,762**	**6,387**	15%	**798**	**144**	18%	**21,563**	**3,397**	16%	**355**	**128**	**36%**

➔ TB Diabetes Mellitus.

In November 2015, Indonesian delegates joined the TB-DM Global Summit held by The Union against TB and Lung Diseases and the World Diabetes Federation. CTB set up a booth on the venue displaying result from early-steps implementation of TB-DM collaboration in Indonesia, such as educational material (video and brochures) and guideline. CTB provided support to 6 participants from professional organizations to attend the conference. The summit produced The Bali Declaration on the Looming TB-DM co-epidemic. http://www.theunion.org/bali-declaration.pdf

Figure 3 .Kitty van Weezenbeek, CEO of KNCV, signed The Bali Declaration on looming TB-DM co- epidemic (Photo by:

In December 2015, CTB supported the MOH in conducting a national level workshop to disseminate TB-DM guideline to six provinces, i.e. North Sumatera, DKI Jakarta, West Java, Central Java, East Java and South Sulawesi. Its expected that all participants

Figure 4. Guideline and media for TB-DM collaboration; National consensus on TB-DM management, Booklet "A Portrait of TB-DM Program Collaboration in Indonesia: Act Now" and TB-DM educational video

will facilitate and actively implement TB-DM guideline in their provinces.

MOH also conducted dissemination workshops to all 34 provinces in July 2016, followed up by provincial level disseminations which are still ongoing until now.
CTB provided support in Jember district of East Java province to disseminate guidelines to health-care workers at facility level, in meetings including clinicians, DM and TB clinics staff, health offices, andBPJS (insurance provider) agreed to support implementation of TB-DM collaboration starting in September 2016. During APA2, CTB also provided technical assistance in the development of the TB-DM collaboration strategy in the 2016-2020 National Action Plan.

In APA 3, CTB will develop a model for TB-DM implementation in two selected districts, to be replicated in other districts the following years. As continuation of previous efforts, at national level CTB will also provide technical assistance to MOH in evaluation of current implementation. Challenges would include the improvement of TB-DM surveillance quality, as TB-DM bi-directional screening and management take place.

- TB in prisons and detention center inmates

In April 2016, an agreed Prisons Action Plan (work plan) between Directorate General of Correction Ministry of Law and Human Rights (MoLHR) and CTB which outlined CTB's work in prisons, was signed by CTB Chief of Party and KNCV country director, Agnes Gebhard, CTB coalition partner focal point and FHI 360 Country Director Caroline Francis and the Director General of Correction. It provides the framework for the CCTB collaboration with the MoLHR on the implementation of Intensified Case Finding for TB, supporting and strengthening linkages so that all inmates can have access to TB, DR-TB and TB/HIV services, developing a post-release program, and articulating an exit strategy.

Challenge TB has also assisted NTP and the MoLHR with intensified case finding (ICF) of TB (including DR-TB and TB/HIV) among inmates through the development of a manual on "TB Control in Correctional Facilities". It includes pro-active ICF, not only entry and annual TB mass screening, but also cough surveillance, pre-release screening, contact tracing, prison staff screening, regular TB screening among inmates with HIV, and the post-release program by parole officers to ensure continuation of TB treatment after release.

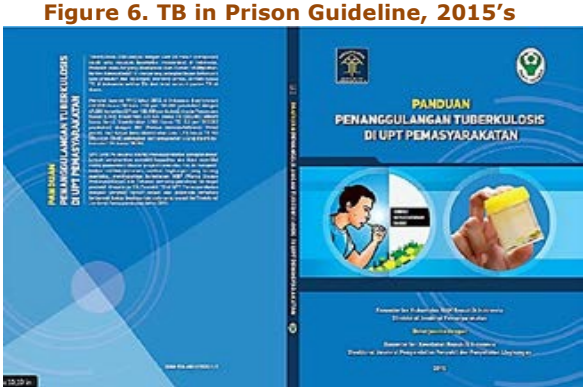
Figure 5. Signing of the Prisons Action Plan by Agnes Gebhard (Challenge TB's Chief of Party/ Country Director of KNCV), Caroline Francis (Country Director of FHI 360), and I. Wayan K. Dusak (Director General of Corrections, MoLHR, in Commemoration of Correction Day (by Trishanty Rondonuwu)

CTB supported the provincial based workshops for dissemination of the implementation manual -TB Control in Correctional Facilities, which were combined with prisons/Detention Center's (DC) linkage strengthening to ensure inmates' access to TB, DR-TB and TB/HIV services at the nearby facilities funded by the DGC's Global Fund budget. Staff from

68 prisons/DCs from 49 districts (including 24 prison from 10 CTB districts) attended this event, with details as in Table 9.

Technical assistance was provided to eight CTB-supported prisons to disseminate the ICF strategy, and to ensure prisons/DCs' access to TB, DR-TB and TB/HIV services at the nearby facilities. CTB supported the provincial based workshop for dissemination of the implementation guideline of TB Control in the correctional facilities to 24 prisons/detention centers in 10 CTB intensified districts.

Figure 6. TB in Prison Guideline, 2015's



Although the situation has improved compared to 2015, 5 prisons still do not offer HIV testing, whereas 7 did not in 2015, 2 have no access to CST, compared to 4 in 2015, and 2 prisons/DCs had no access to GeneXpert services in both 2015 and 2016. Two prisons (Gunung Sindur Prison and DC in West Java) had no health staff at all in 2015 though the MoLHR has allocated trained TB staff in 2016.

Table 8. The number of prisons conducting ICF in 2015 and 2016 (Up to June '16)

ICF Method	Number and % Prisons/DCs conducting ICF TB			
	2015	%	2016 *	%
New inmates screening	19	79%	20	83%
Annual mass screening for inmates	12	50%	8	33%
Annual mass screening for prison staff	0	0%	8	33%
Cough surveillance	3	13%	8	33%

*up to June 2016

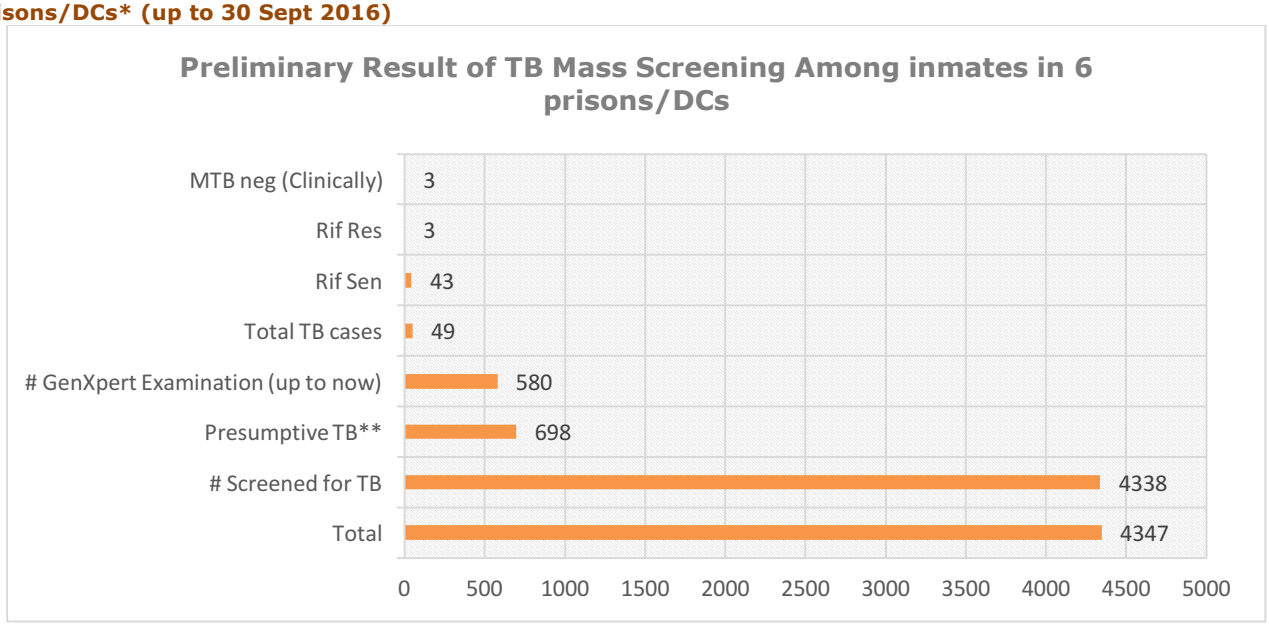
The new inmate screening is nationally funded by the Global Fund. Four new CTB supported prisons (Bandung city – Sukamiskin prison; Bogor - Gunung Sindur Prison, Gunung Sindur Detention Center; Deli Serdang - Branch of Lubuk Pakam Prison in Pancur Batu) did not conduct new inmate screening or report TB data, due to a shortage of medical staff and limited supervision of TB services, although the new staff in Gunung Sindur DC and prison are now trained on TB. As a next step, CTB will support supervision andhelp develop external linkages for these these four prisons/DCs, so that they will receive support from local health facilities to conduct screening of new inmates.

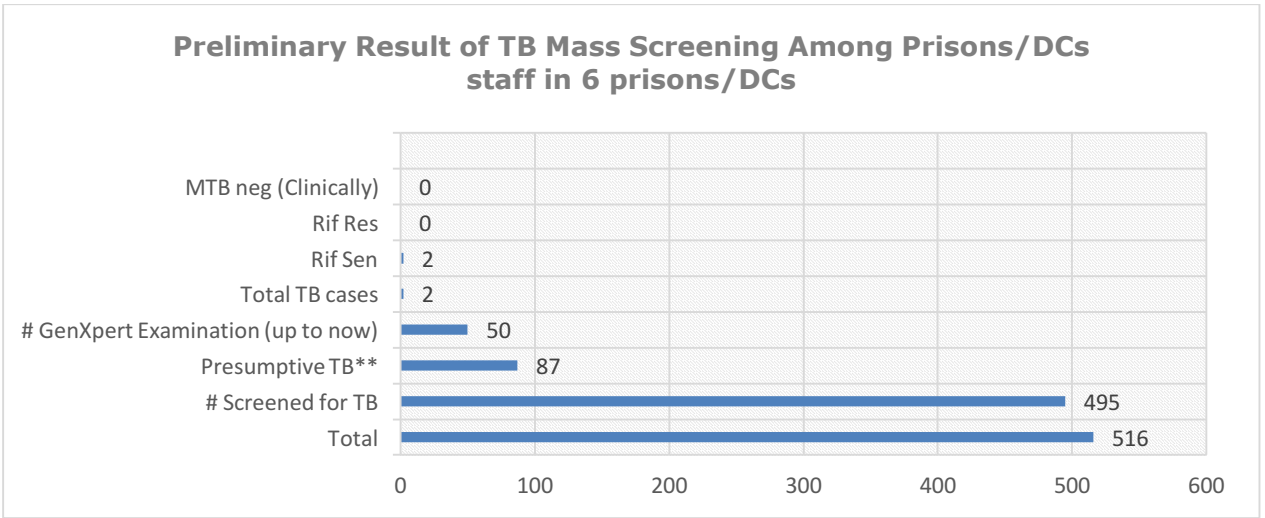
CTB supported the new initiative of Annual TB Mass Screening using modified symptom and chest X-Ray screening with GeneXpert examination for diagnosis of TB and Rifampicin resistant TB in 8 prisons/DCs with 8,600 inmates and 800 prisons/DCs staff. In APA3, additional mass screening will be conducted in 7 prisons/DCs, while working on mobilization of resources and capacity building for staff from the correctional services to continue the screening without CTB support. The mass screening data were analyzed and an evaluation of an IEC video on how to produce quality sputum was conducted. Enhanced data monitoring is ongoing and will be continued in APA3. At the national level, TB case finding from mass screening will be recorded in Q4 of 2016, and thus will not be included in the CTB APA2 report. The DG of Corrections will use the results of

this screening to decide on a domestically funded policy for active case finding of TB in correctional facilities.

The main challenges to successful Annual TB mass screening in the prisons were limited GeneXpert capacity, especially in districts where prisons have a high number of inmates; limited medical human resources in most of the prison/DCs; difficulties in producing good quality sputum, especially among non-coughing patients; and data management. In APA3, CTB anticipates that new GeneXpert machines will be installed and lessons learned on good collaboration with DHO to support the additional HR needs as well as to overcome any issues with access to GeneXpert.

Figure 7. Preliminary Result of TB Mass Screening among inmates (orange) and staff (blue) in 6 prisons/DCs* (up to 30 Sept 2016)





In total 88% (21/24) of prisons/DCs are reporting TB data and indicators, including TB/HIV, to the NTP and the MoLHR through the District Health Offices (DHO) and the MoLHR Provincial Offices, compared to 70% (17/24) in 2015. Gunung Sindur Prison and the Detention Center (in Bogor) do not report to the MoLHR but report through Puskesmas Gunung Sindur, while the Branch of Lubuk Pakam Prison in Pancur Batu, Deli Serdang does not report to iether NTP nor MoLHR because it has no medical staff and refers patients to nearby clinics. CTB will support supervision and the external linkage development for these prisons/detention centers. 50% (12/24) has reported electronically using SITT to NTP, compared to 46% (11/24) in 2015.

Results of TB ICF and TB-HIV collaboration among inmates can be seen in table 10 :

Table 10. TB-HIV collaboration from prisons/DCs in 10 CTB districts

Indicator	2015		2016*	
	#	%	#	%
PLHIV screened for TB	1389/1398	95%	698/718	97%
TB patients know HIV status	138/232	59%	79/119	66%
TB/HIV patients started ART	29/64	45%	24/35	69%

* up to June 2016

The TB treatment success rate (table 11) in the 2014 cohort has increased till (62%) as compared to the 2013 cohort (56%). However, this is still below the national target for the TB program in correctional facilities (85%). The increased "not evaluated" proportion were due to high transfer out and released inmates. In APA3, CTB will work together with local NGOs, DHO and Parole Office to develop a post release program for TB and HIV patients.

Table 11. Treatment result among inmates with TB from prisons/DCs in 10 CTB districts (all TB cases, new and re-treatment)

Treatment Result	TB Patients cohort 2013	TB Patients cohort 2014
Cured	67 (27%)	79 (34%)
Completed	72 (29%)	67 (29%)
Died	22 (9%)	18 (8%)
Failed	6 (2%)	12 (5%)
Lost to follow up	10 (4%)	1 (0%)
Not evaluated	74 (29%)	59 (25%)
Total	251	232

** At the national level, TB case finding from the mass screening will be recorded in Quarter 3 of 2016, thus not included in CTB APA2 report.*

Access to quality treatment and care ensured for TB-HIV for all risk groups from all care providers

Programmatic Management of Drug-resistant TB

In APA 2, 7 new sub referral PMDT centers have been established, which brings the total number for PMDT sites in CTB provinces to 21; 7 referral hospitals and 14 sub referral hospitals (table 12). Some of them have started their services (RS Iskak Tulungagung, RS Sudono Madiun, and BBKPM

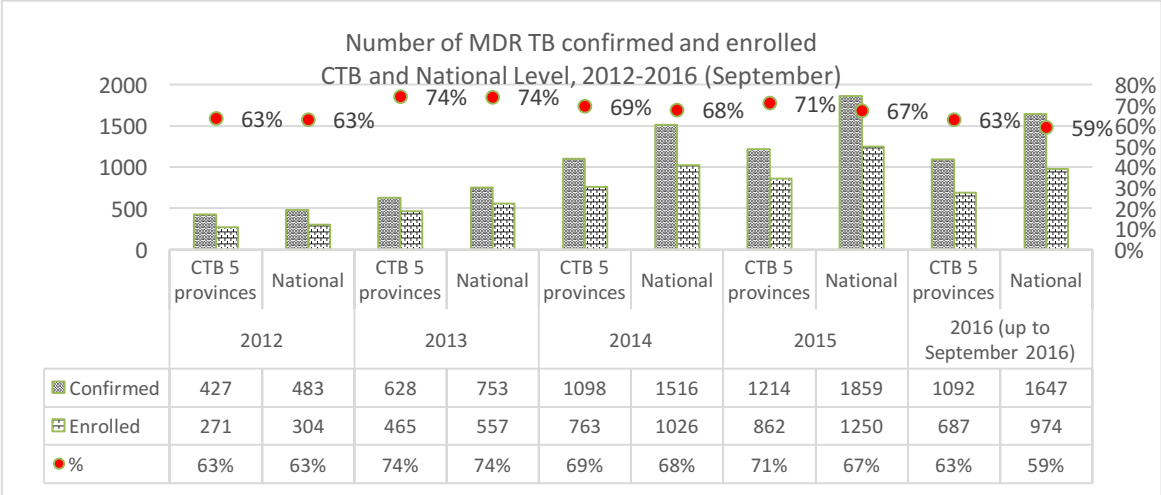
Bandung) and other sites are making progress in preparation of their services with CTB support to ensure the quality, including reporting & recording.

Table 12. PMDT sites

Provinces	Referral Site	Sub referral	New PMDT (Referral/ Sub referral) **during APA 2**
North Sumatera	1 (RSUP. H. Adam Malik)		
DKI Jakarta	1 RS Rujukan (RSUP Persahabatan)	1 RS Sub Rujukan (RSI Cempaka Putih)	1 RS Sub Rujukan (RSI Cempaka Putih)
West Java	1 (RSHS)	3 RSPG Cisarua Bogor, BBKPM Bandung, RSUD Gunungjati Cirebon	1 BBKPM
Central Java	2 (RSUD dr. Moewardi dan RSUP dr. Kariadi)	5 (RSUD Kudus, RSUD Cilacap, RSUD Kardinah Tegal, RSUD Temanggung dan RS Paru Ario Wirawan Salatiga)	2 (RSUD Kardinah Tegal, RSUD Temanggung)
East Java	2 (RSUD Dr. Soetomo Surabaya & RSUD Saiful Anwar Malang)	5 (RS Paru Jember, RSUD Soedono Madiun, RSUD Dr. Iskak Tulungagung, RSUD Ibnu Sina Gresik, RSUD Jombang)	3 (RSUD Dr. Iskak Tulungagung, RSUD Ibnu Sina Gresik, & RSUD Jombang)
Nation wide			

The number of patients detected with DR TB increased from 2012 to 2015 (figure 8). In 5 CTB provinces the number of detected MDR TB patients increase from 427 (in 7 PMDT sites-2012) to 1214 (in 16 sites-2015); nationwide the numbers increased from 483 (9 PMDT sites-2012) to 1859 (58 sites- 2015). Among the detected MDR TB patients, from 2014 to 2015 the enrollment rate in CTB area increased slightly from 69% (763/1098) to 71% (862/1214), still below the CTB target 2015 (100%). Improving the enrolment rate is one of the main focal areas for APA3.

Figure 8. Graph Number of MDR TB confirmed and enrolled (2012-2016 September), CTB and Nationwide



	CTB 5 provinces	National	CTB 5 provinces	National	CTB 5 provinces	National	CTB 5 provinces	National	CTB 5 provinces	National
	2012		2013		2014		2015		2016 (up to September 2016)	
Confirmed	427	483	628	753	1098	1516	1214	1859	1092	1647
Enrolled	271	304	465	557	763	1026	862	1250	687	974
%	63%	63%	74%	74%	69%	68%	71%	67%	63%	59%

**source: etB manager, Confirm MDR B (Number of MDR TB patients who are suspected and confirmed in the same period)*

- Introduction of the shorter regimen for treatment of MDR TB started.

CTB facilitated a meeting on the introduction of the shorter MDR treatment regimen.
The meeting was attended by representatives from TB Sub-directorate MoH, Pharmacy Management MoH, Food and Drugs Administration, MDR TB expert committee, University of Indonesia, Persahabatan Hospital Jakarta, Hasan Sadikin Hospital Bandung W. Java, Dr. Soetomo Hospital Surabaya E. Java, Dr. Moewardi Hospital Surakarta C. Java, Dr. Kariadi Hospital Semarang C. Java, BBLK Surabaya E. Java, and WHO. The participants committed to the implementation of shorter MDR regimen, starting from making a development plan, adjusting the treatment guideline, adoption of aDSM tools, development of IEC materials, adjusting the PMDT training curriculum , M/QICA implementation, etc. until the implementation can start mid 2017 (pending procurement) A challenge for the early implementation of the shorter regimen is a recent drug order for the longer regimen, and to find a solution for the redundant drugs following the change to the shorter regimen. Discussions between the Government of Indonesia, GDF and GF are ongoing to solve this issues.

- Cohort review

CTB provided TA on the development of an Enhanced Cohort Review (ECR) Roadmap October 26th – 30th, 2015 in Jakarta which was attended by the representative of NTP, PHO from 4 provinces (DKI Jakarta, W. Java, E. Java, and C. Java), representative from hospitals, and CTB. The goal of the meeting was to plan the integration of the ECR onto the PMDT as part of its monitoring and evaluation mechanism. Also, to develop the roadmap for transition of supervision and implementation responsibility from CTB to NTP.

All of DR TB referral hospitals (and some sub-referral) in our supported provinces have implemented ECR quarterly.

NTP has agreed to adopt and include ECR as part of PMDT activity for continuous improvement of patient care and program management at facility level and started in Q2 2016. Cohort review meetings in several DR-TB hospitals were funded by the national program. In addition, CTB has developed a handbook of enhanced cohort review and a tutorial video that will be used as a guidance for ECR implementation in PMDT hospitals. Brief introduction of ECR has also been included in the updated curriculum and module of PMDT training. In addition to the full cohort review, under APA3 monthly and quarterly interim cohort assessments will be tools to assist in monitoring and closing the diagnostic treatment gap and preventing lost to follow-up while improving clinical and program management; this process and the results will be documented.

Motive8 and expert patients trainer

In 2014, TBCARE I introduced Motiv8 as a behavioral change communication strategy to respond to the high default rate and low enrollment of DR TB patients. Motiv8 was then incorporated into the national PMDT training for health care workers. The training methodology combines presentations and discussions with role plays by Expert Patient Trainers (EPT) for DR TB. These EPT are ex-DR TB patients or DR TB patient who are in the continuation phase of treatment, who have received training on provision of feedback to health care workers on their communication skills.

In APA 2 Q1, CTB supported a Motiv8 workshop for DR TB peer educators (16 participants: M=8, F=8) combined with capacity building for EPT (8 participants:M=5, 3 F=3). These EPTs were then involved in conducting PMDT training for health care workers in Surabaya, East Java (23 participants: M=6 and F=17).

In 2016, NTP decided to develop the relevant Motiv8 module into a specific training, Motivational Communication Training. The CTB team supported NTP to develop a 3 day training module for Motivational Communication. The module consists of 5 chapters: Introduction to Motivational Communication, Key Skills of Motivational Communication, Change Talk and Sustain Talk, Traps in Motivational Communication, and Steps in Motivational Communication. All training modules are translated into English and currently under review by Matthew Avery (FHI 360's APRO staff – Motiv8 Master Trainer). In APA 3, the CTB team will support NTP to facilitated a ToT for Motivational Communication and continue to provide TA as needed to scale-up the implementation of the Motivational Communication for TB program.

TB-HIV

CTB supported strengthening of collaboration between the TB and HIV programs at national and provincial levels through TB-HIV joint planning and joint program monitoring and mentoring. At national level, all 34 provinces developed TB-HIV joint planning documents. From these provincial plans district level TB-HIV joint planning documents were developed. The TB programmer and HIV programmer from each province participated in the national joint planning workshop. The CTB team facilitated the planning process. At the workshop, each province decided on indicator targets and then subsequently designed strategies to achieve each target.

The same exercise was repeated at the provincial level. Each district sent their TB and HIV programmers to participate in the province's joint planning workshop. CTB supported the development of TB-HIV joint planning district level documents in 4 provinces: North Sumatera, West Java, Central Java and East Java. See district details in Table 16. During APA2 eight out of ten intensified CTB districts developed TB-HIV joint planning documents.

Table 13. Percentage of District in CTB area with TB-HIV Joint Planning Document

Provinces	Number of Districts	Number of Districts have TB-HIV Joint Planning Document
North Sumatera*	33	8 (24%)
West Java	27	27 (100%)
Central Java	35	35 (100%)
East Java	38	38 (100%)
DKI Jakarta**	6	0 (0%)

*Note: * North Sumatera only invited 8 out of 33 district for the TB-HIV Joint Planning Workshop. The 8 districts are the districts with support from NFM*
*** DKI Jakarta has not yet conducted the TB-HIV Joint Planning Workshop.*

In each workshop, the CTB National Technical Officer provided TB-HIV capacity building for TB and HIV programmers, with the exception of East Java and DKI Jakarta Provinces. The process included TB and HIV indicator analysis, as well as service and linkage mapping for all health facilities.

As part of the monitoring process, Challenge TB supported NTP, NAP, provincial health offices and district health offices to conduct joint TB and HIV monitoring and mentoring to several health facilities (17 ART referral hospitals and 7 puskesmas) with details below in Table 14. The team was guided by a modified TB-HIV supervision checklist. Situation and data analysis during the visits improved the monitoring process. Mentoring on TB-HIV collaborative activities was provided during the sessions to TB-HIV teams and clinicians as needed based on the findings.

Findings from nine ART referral hospitals and one puskesmas in CTB intensified areas included:

1. Many staff were already trained by the TB program as well as the HIV program. Some also received TB/HIV collaborative training.
2. Health facilities do not have written planning documents or internal monitoring and evaluation mechanisms for TB-HIV implementation in place.
3. The TB screening process during PLHIV's visits to health facilities was well implemented with 92% (range of 70-100%) receiving screening in the previous six months.
4. ART referral hospitals with GeneXpert machines were already utilizing the machine for TB diagnosis among PLHIV.
5. Of the nine ART referral hospitals which had begun IPT implementation in 2015, some were no longer prescribing it in 2016 due to logistic issues.
6. For health facilities that were already offering HIV testing to TB patients, the data showed variable results. Puskesmas offered HIV tests to 97.9% of TB patients, while data was not well documented in hospitals with only between 13.8 and 85.6% offered testing. From those in facilities who were offered the HIV test, 50% were tested (range 13% - 100%). TB staff reported that high refusal rates and the reluctance of staff to offer testing due to worries of stigmatization were the biggest challenges.
7. Overall, only 23% of all TB patients had a documented HIV status in the TB register (range: 0-90%).
8. An average of 29% of TB-HIV co-infected patients started ART between two and eight weeks after the start of TB treatment, however this was affected by patient condition, patient refusal, and under-recording by health facility staff.
9. Some health facilities still using the "old" version of the TB form, which resulted in under-reporting of TB-HIV collaboration data.

Results from joint TB and HIV program monitoring/mentoring visits and the agreed next steps were shared with the heads of section in district/provincial health offices as well as at the health facilities themselves. The team planned follow up visits to these health facilities six months after the initial visit as part of the QA/QI process. Unfortunately, due to restrictions on CTB activities during the third and fourth APA2 quarter, these activities were postponed until APA3.

An internal planning workshop on coordination and collaboration brought USAID funded CTB and LINKAGES teams together to brainstorm innovative approaches to TB/HIV collaboration between the two programs in Q4 of APA2. Several areas will be strengthened and joint programming will be piloted. In the upcoming year, CTB plans to emphasize capacity building on provider initiated testing and counseling (PITC) for TB staff, district-based workshops for TB-HIV collaborative activities for private clinicians through the professional organizations, and discussions with TB-HIV teams at health facilities to improve the TB-HIV care, recording reporting and data analysis for decision making. HIV outreach workers for key populations will be trained to conduct community based TB screening and assist with case management of TB clients. A new TB/HIV integration clinical model will be piloted in two health facilities. Under APA3 provincial surveillance teams (SO 10) will assist in approving the recording and reporting of HIV testing and ART.

Table 14. List of Health Facilities and Districts supported for TB-HIV Joint Monitoring and Mentoring in CTB area and outside CTB area

Provinces	Districts	Hospitals	Puskesmas
North Sumatera	Medan	1. RS Adam Malik 2. RS Pirgandi 3. RS Bhayangkara 4. RS Haji Medan	
DKI Jakarta	Jakarta Timur	1. RS Persahabatan	
	Jakarta Pusat*	2. RSUPN Cipto Mangunkusumo	
	Jakarta Utara	3. RSPI Sulianti Saroso	
West Java	Bandung	1. RS Hasan Sadikin	
	Kab. Bogor	2. RSUD Cibinong	
	Kota Bogor*	3. RS Marzoeki Mahdi	
Central Java	Surakarta	1. RS Moewardi	
East Java	Jember	1. RS Subandi	1. PKM Kencong
South Sulawesi	Makassar	1. RS Bhayangkara	1. PKM Jongaya 2.
	Gowa	1. RS Syekh Yusuf	3. PKM Pallanga
West Papua*	Sorong	1. RS Sele Be Solu 2. RSUD Sorong	1. PKM Remu 2. PKM Mariyai 3. PKM Malawili
	Manokwari	3. RSUD Manokwari	4. PKM Amban

- TB-HIV Policy, Guideline and Tools Revision

During APA 2, CTB supported the NTP to revise the TB National Strategic Plan 2015-2019 and the TB-HIV National Action Plan 2015-2019 to include district level targets. The CTB team supported the TB-HIV national team to revise the targets for HIV testing among TB patients in 514 districts. The targets chosen were based on the case notification rate and the funding support/resources for TB-HIV collaboration in each district. All 10 CTB intensified districts fall into the category of A1 (CNR ≥ 129/100,000 population) and have full funding support/resources for implementing TB-HIV collaborative activities.

The CTB team also supported NTP and NAP to disseminate the TB-HIV National Action Plan to 34 provincial TB and HIV programmers in three batches of national workshops. CTB support included preparation of TB-HIV capacity building materials, presentation of the materials to participants, assistance with service and linkage mapping, and facilitation of discussions on TB-HIV indicator achievement analysis.

Figure 9 .TB-HIV National Action Plan 2015-2019 - TB-HIV Implementation Guideline Document – TB-HIV Training Module for Health Care Worker (Left to Right)

The TB-HIV training module for health care workers was also revised to reflect the new TB-HIV implementation guidelines. CTB supported the development of these training modules, as well as NTP/NAP's National Training of Trainer for facilitators from 34 provinces (78 participants: M=37, F=41).

- IPT for PLHIV

  Under APA1 10 out of 27 ART referral hospitals already implemented IPT. In APA2, the CTB targeted was that all 27 ART referral hospitals in the 10 CTB intensified districts would implement IPT. However, due to restrictions on CTB activities during the second half of the year, the planned IPT workshop for ART hospitals could not be conducted and was postponed till APA3.

  IPT implementation in these 10 ART hospitals is very weak due to problems in procurement and distribution of INH and providers' commitment.

  As a next step, in APA 3 CTB will support NTP and NAP to improve the distribution mechanism of INH and vitamin B6. CTB will also support NTP and NAP to scale-up IPT implementation in ART referral hospital in 16 CTB districts through district based workshops, involving professional organizations. CTB will also advocate for implementation of IPT below hospital level, as most PLHIV are seen for care and treatment at the Puskesmas level.

- TB in children

  Contact investigation and IPT (isoniazid preventive therapy) implementation in 7 provinces (Banten, W. Java, Papua, E. Java, Babel Islands, DKI Jakarta, and N. Sumatra) after the dissemination workshop have been evaluated by the TB-Children team during their TA visit in their respected site on August 2016. CTB represented by KNCV and WHO were involved in the visit to selected health facilities, TB-children data evaluation, TB-children refreshment training, and problem identification and action planning in each province. The team will continue to disseminate the guideline on CI & IPT to other areas, conduct advance TA and monitoring to the assisted provinces, strengthen the networking internally and externally, ensure the funding for contact investigation in puskesmas, ensure the logistics availability (drugs, tuberculin, and TB forms) in all care providers, and improvement of TB-children surveillance quality including CI & IPT.

  The workshop to revise the TB-Children treatment guideline has been conducted on August 2016. Currently it is under the final editing by the task force involving CTB before process for printing. On the revised guideline, it consists the new diagnostic flow for TB and DR-TB in children, TB-children prevention (BCG vaccine and care and treatment), and special TB treatment (TB perinatal, TB-HIV, and TB-DM). The dissemination of the intended guideline was conducted during the TB-Children workshop in all 34 provinces in 3 batches from August to October 2016. The TB program manager and member of Indonesian Pediatric Society participated in the workshops and they will act as the training facilitators in their respected area.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	**Y2**
3.1.1.	Number and percent of cases notified by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e. gender, children, miners, urban slums, etc.) and/or case finding approach	Description: The number of TB cases all forms (i.e. bacteriologically confirmed plus clinically diagnosed, new and relapse) reported by the NTP disaggregated by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e., gender, children, miners, urban slums, etc.) and/or case finding approach (ICF, ACF, CI). Private sector providers should be described according to context and case finding approach, for example, type of provider targeted (i.e., for profit medical clinics, pharmacists, informal providers, private hospitals, etc.) Indicator Value: Number and where available, percent Level: National and Challenge TB geographic areas Numerator: Number of TB cases all forms (bacteriologically confirmed + clinically diagnosed; includes new and relapse cases) reported (by setting/ population/ case finding approach) nationally and in Challenge TB geographic areas in the past year Denominator: Total number of TB cases (all forms) notified nationally and in Challenge TB geographic areas	1. TB-DM= Not Available 2. TB-HIV= Not Available 3. TB Children= Not Available 4. CI = Not Available 5.TemPO= Not Available	TBD	1. TB-DM: 4% (65/1754) (2015) (Surakarta City only) 2. TB-HIV 2% (798/43,762) (2015) 3. TB Children 13% (5,574/43,762) (2015) 4. CI: NA 5. TemPO: NA
3.1.4.	Number of RR-TB or MDR-TB cases notified	Description: Total number of bacteriologically confirmed MDR-TB cases diagnosed. Project should follow the MDR-TB/Xpert algorithm in country regarding whether Rifampicin-resistant TB cases (RR-TB) should be counted as confirmed MDR-TB. If a country's algorithm states that a RR-TB cases is automatically assumed to be MDR-TB (i.e. no further DST required), then RR-TB should be included in the number of confirmed MDR-TB cases diagnosed. Otherwise, RR-TB should be excluded until proven via further DST that the case is a confirmed MDR-TB case. Indicator Value: Number Level: National and Challenge TB geographic areas Numerator: Number of bacteriologically confirmed MDR-	1,299 (2014)	NA	<u>CTB 5 provinces</u> 1,214 (2015) 1,087 (APA2)

		TB cases diagnosed during the reporting period			
3.2.1.	Number and percent of TB cases successfully treated (all forms) by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (i.e. gender, children, miners, urban slums, etc.).	Description: The proportion of a cohort of TB cases (all forms, bacteriologically confirmed and clinically diagnosed, new and relapse) registered in a specified period that were successfully treated, whether with bacteriologic evidence of success ("cured") or without ("treatment completed") by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (gender, children, miners, urban slums, etc.) and/or risk population groups defined by national policy (IDUs, diabetics, prisoners, etc.). There may be overlap between settings and groups. Disaggregation by risk population is required in contexts where Challenge TB is providing treatment support for a specific group according to the annual work plan or in contexts where operations research allows for disaggregation and comparison across groups. Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: Number of new and relapse TB cases (all forms) registered in a specified period that were cured or completed treatment Denominator: Total number of new and relapse TB cases (all forms) registered in the same period	84% (33,048/ 39,571) (2013, 10 CTB districts)	90%	81% (33,369/41,068) (2014, 10 CTB district)
3.2.4.	Patients started on MDR-TB treatment	Description: The number of bacteriologically confirmed, clinically diagnosed or unconfirmed MDR-TB cases started on second-line treatment during the reporting period. Unconfirmed MDR-TB cases are those awaiting C/DST results. RR-TB may fall under confirmed or unconfirmed depending on the country's MDR-TB diagnosis algorithm. Indicator Value: Number Level: National and Challenge TB geographic areas Numerator: The number of confirmed or unconfirmed MDR-TB patients started on second-line treatment in the reporting period	National (2014) = 1,284 CTB 5 provinces (2014) = 974	100% of MDR-TB detected	<u>National</u> 1,585 (2015) 1,646 (APA2) <u>CTB 5 provinces</u> 1,117 (2015) 1,155 (APA2)

3.2.7.	Number and percent of MDR-TB cases successfully treated	Description: The proportion of confirmed MDR-TB patients successfully treated (cured plus completed treatment) among those enrolled on second line TB treatment during the reporting period (where applicable disaggregation by HIV status, XDR status). RR-TB may fall under confirmed MDR-TB depending on the country's MDR-TB diagnosis algorithm. Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: Number of confirmed MDR-TB cases successfully treated (cured plus completed treatment) Denominator: Total number of confirmed MDR-TB patients enrolled on second line TB treatment during the reporting period.	National (2012) = 55% CTB (2012) = 56% (217/389)	65%	<u>National</u> 50% (411/820)(2013) <u>CTB 5 provinces</u> 51% (358/702) (2013)
3.2.12.	Percent of HIV-positive registered TB patients given or continued on anti-retroviral therapy during TB treatment	Description: The purpose is to measure commitment and capacity of TB service to ensure that HIV-positive TB patients are able to access ART. This indicator measures people registered as HIV-positive who started TB treatment and who also started or continued on ART (i.e. recorded in ART register). Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: All HIV-positive TB patients, registered over a given time period, who receive ART (are started on ART) Denominator: All HIV-positive TB patients registered over the same given time period.	184/311 (59) (2013)	100%	18% (144/798) (2015, 10 districts) 36% (128/355) Up to June 2016- 10 districts
3.2.13.	TB patients (new and re-treatment) with an HIV test result recorded in the TB register	Description: The purpose is to assess how many TB patients know their HIV status, regardless of whether testing was done before or during TB treatment. In settings where HIV is driving the TB epidemic, all TB patients should be offered and encouraged to have an HIV test. Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: Number of TB patients registered over a given time period with an HIV test results recorded in the TB register. Denominator: Total number of TB patients registered over the same time period.	1,218/ 21,550 (6%) (2013)	25%	15% (6,387/43,762) (2015,10 districts) 15% (4,957/33,396) (Oct 2015-Jun 2016, 10 districts)

Objective 2. Prevention

Sub-objective 5. Infection control

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	**Y**
	5.2.3. Number and percent of health care workers diagnosed with TB during reporting period	Description: This indicator measures the percent of healthcare workers (HCWs) diagnosed with TB (all forms) annually (disaggregated by gender and age). This measurement may require a special study using a validated tool and/or methodology. Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: Number of HCWs diagnosed with TB (all forms) during past year Denominator: Total number of HCWs in the same year	Not Available	TBD	NAUnavailable (underAPA2 CTB did not invest in HCW diagnosis)

Sub-objective 6. Management of latent TB infection

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	**Y**
	6.1.7. #/ eligible PLHIV with LTBI started on preventive treatment	Description: This indicator measures proportion of PLHIV with LTBI who started TB preventive treatment. Note this measurement will be done through a separate study within the core prevention project Indicator Value: Percent Level: National and Challenge TB geographic areas Numerator: All eligible PLHIV with LTBI started on preventive treatment during the year Denominator: Total number of eligible PLHIV with LTBI registered in the same year.	163 /299 (55%)	75%	311 ODHA started IPT in 2015* *data for PLHIV who were eligible for IPT are not available due to RR limitation
	6.1.11. Number of children under the age of 5 years who initiate IPT	Description: The number of children under the age of 5 years who initiate isoniazid preventive therapy (IPT) during the reporting period. Indicator Value: Number Level: National and Challenge TB geographic areas Numerator: The number of children under the age of 5 years who initiate IPT during the reporting period.	Not Available	TBD	26 (Jan-Jun 2016)* *Data available only in 3 districts: Medan City, East Jakarta, and Bandung City

Objective 3. Strengthened TB Platforms

Sub-objective 7. Political commitment and leadership

CTB supported the NTP to strengthen political commitment for TB control both for national TB program, health providers and patient on community. Priority activity for this sub-objective during APA 2 were the development of TB regulatory frameworks such as mandatory notification, revision of national guidelines, PNPK and mainstreaming those regulations into service quality assurance and the accreditation system. These are essential for the TB control program and health providers, as well as for integration of TB services packages into National Health Insurance (*Jaminan Kesehatan Nasional*/ JKN).

To strengthen leadership at district level, CTB provide supported NTP in securing the TB agenda in the District-Minimum Standard of Service (Standar Pelayanan Minimum/SPM), standards, promoting and facilitating the development of district TB action plans to ensure that the TB control program receives an adequate share in local governments' planning and budgeting. District Action Planning was started by CTB in collaboration with the Ministry of Health and related government institutions. CTB is facilitating the local Office of Health to develop and advocate the stop TB program to the stakeholders.

To implement SO 7, CTB worked with several key partners, like IMA (Indonesia Medical Association), National Insurance Agency (BPJS), P2JK, Accreditation MoH, to engage Private Practitioners in TB Program.

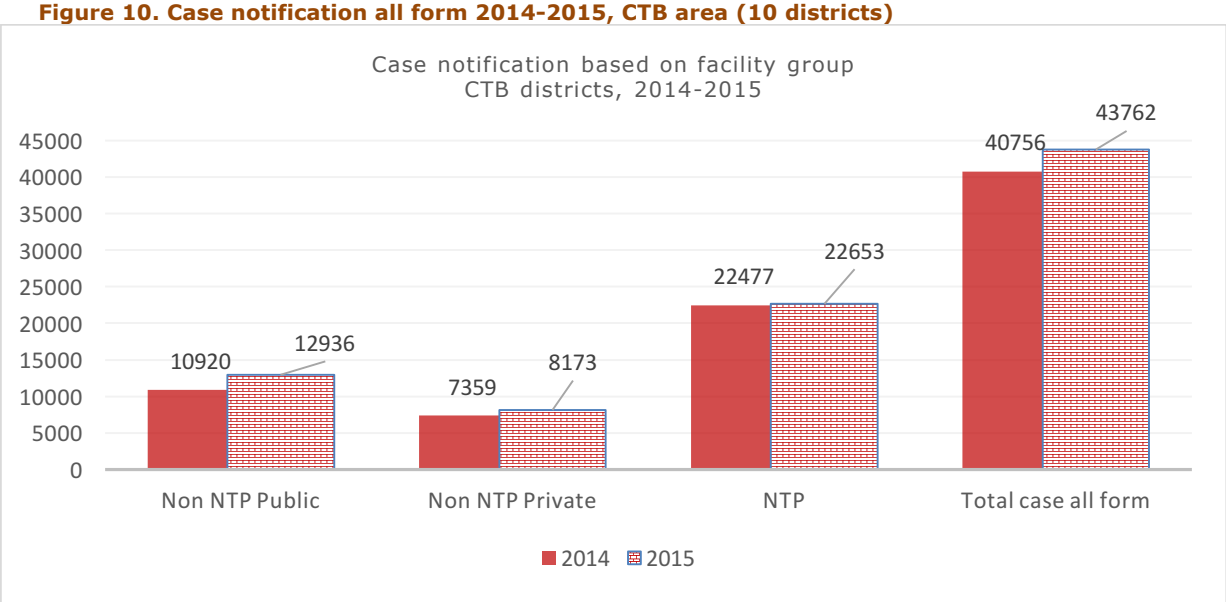
Key Results

Non NTP involvement strengthening

Based on the NPS result showing that only 32% of TB cases are notified, a variety of interventions were implemented such as ICF, TB Distance Learning for GPs and PPM establishment. CTB continuesly provided support to those approaches, included technical assistance on TB Surveillance to the new facilities which never report TB cases.

This support has contributed to increased TB notification in CTB area as much as 7% (from 40,756 to 43,762), see figure 8 . Non NTP contribution increased 3% from 45% (2014) to 48% (2015).

Figure 10. Case notification all form 2014-2015, CTB area (10 districts)



Tabel 15 shows that between 2014 to 2015, NTP private facilities which contributed in case notification increased including those in Medan City, Bandung City, and Tulung Agung. In some districts more attention is needed, such as Deli Serdang, North Jakarta, Jember and Bogor. Their contributions were below the average or decreased from 2014.

Table 15. Case notification by facility group

	2014 *TB cases (% facilities reported)*			2015 *TB cases (% facilities reported)*		
	Non NTP Public[5]	Non NTP Private[6]	NTP[7]	Non NTP Public	Non NTP Private	NTP
Medan City	1480 (71%; 10/14)	1525 (30%;19/64)	2621 (100%; 40/40)	1575 (78%;11/14)	2118 (34%; 22 / 64)	3003 (100%; 40 / 40)
Deli Serdang	270 (100%; 2/2)	372 (19%;4 /22)	2254 (100%; 34/34)	198 (100%; 2/2)	436 (18%; 4 / 22)	2374 (100%;34 / 34)
North Jakarta	1135 (40%; 2/5)	537 (46% ;10 /22)	1368 (88%;43/49)	1153 (40%; 2/5)	512 (32%; 7 / 22)	847 (79%; 39 / 49)
East Jakarta	2819 (76%; 13 /17)	1045 (58%;15 / 26)	2644 (100%; 88/88)	3292 (71%; 12/17)	1497 (58%; 15 / 26)	2649 (100%; 88 / 88)
Bandung City	2318 (57%; 8 /14)	2383 (7%; 10 / 141)	2385 (100%;74/74)	2560 (57%; 8/14)	2232 (8%; 11 / 141)	2458 (100%;74/74)
Bogor	1515 (40%; 4 /10)	626 (0.3%; 1 0f 304)	5597 (100%; 102/102)	2599 (70%; 7/10)	195 (0.3%;1 / 304)	5452 (100%; 102/102
Semarang City	861 (100%; 8 /8)	498 (44%; 8/ 18)	1254 (100%; 38/38)	902 (100%; 8/ 8)	632 (44%; 8/ 18)	1434 (100%; 38/ 38)
Surakarta City	323 (100%; 4/4)	312 (60%; 6 / 10)	857 (100%; 18/18)	319 (100%; 4/ 4)	511 (60%; 6/ 10)	924 (100%; 18/ 18)
Tulung Agung	90 (100%; 2/2)	61 (29%; 4 / 7)	467 (84%; 26/31)	298 (100%; 2 2)	40 (43%; 3 / 7)	454 (100%; 29 / 31)
Jember	109 (40%; 2/5)	0 (0%; 0/7)	3030 (100%; 49/49)	40 (40%; 2 / 5)	0 (0%;7 / 7)	3058 (100%; 49 / 49)

* (not include Private Practitioner)

Private Practitioners

GPs (General Practitioners) certification implementation guideline has been officially issued by the Indonesian Medical Association (Ikatan Dokter Indonesia/IDI). CTB also facilitated the DHO in Tulungagung, E. Java to develop an SOP at the district level through a 3-day workshop involving IDI, BPJS (Social Security Agency), and DHO.

CTB provided technical assistance and facilitated the implementation of activities in CTB areas on the distance learning programs for private practitioners (in collaboration with The Agency for Development and Empowerment Human Resource of Health /BPPSDMK, Indonesia Medical Association/ IMA and the District Health Office/DHO), and the Hospital DOTS Linkage (HDL) strategy.

In CTB area only 54% (52/97) participants passed the distance learning program. Most of them failed because of dropped out before completing the program. One of the certified GPs in Bandung City said that to complete the program, participants should have proper commitment for time and complete the task. In APA 3 CTB will sub grant the professional

[5] Non NTP Public: Owned by goverment; Detention, Public Hospital, Police/ Army Hospital
[6] Non NTP Private: Owned by private sector; Private hospital, Clinic
[7] NTP: Public Health Center (*Puskesmas*) and Lung Clinic (*BKPM/BBKPM*)

organizations to encourage their members to complete the course and have this included in their TB certification criteria.

Table 16. PPs participated and passed/certified for 1st batch distance learning program

CTB area	Participated	Certified
Medan City	20	3
Deli Serdang	6	2
North Jakarta	4	0
East Jakarta	13	6
Bandung City	10	5
Bogor	5	0
Semarang City	10	2
Surakarta City	3	2
Tulung Agung	8	5
Jember	9	6
Natio wide	97	52 (53.6%)

Besides that, in September 2016, CTB collaborated with IMA Bandung city to continuously improve private practitioner's involvement in TB programs. One of the efforts is to disseminate distance learning programs through a survey that will explore what factors may encouraged the private pratitioners to participate. This survey mapped IMA's members (registering the coordinates of the PP's location), updating the IMA member database, and providing insight into the TB services rendered by the members. Out of a total of 1567 private practicioners visited by the enumerators (based on the IMA registration), 666 filled in the questionnare. The remaining 901 refused to participate, did not have an up-to-date address, or were not present during the visit. From the 666 participants, only 629 could be analyzed. The detailed results of the survey will be available by the end of October 2016.

District Action Planning

To ensure the sustainability of TB programs and the achievement of NTP expected targets, strong commitment from decision makers is necessary. With a decentralized system of government, the role of decision makers at the district level to ensure that TB is their priority in the region is very important. Hence, for TB elimination ownership, each district in Indonesia is required to have their own action plan, in line with their situation analysis.

- Technical Guidelines for district TB planning developed

CTB has developed technical guidelines for TB district planning (District Action Plan for TB Elimination). It contains the basic concept of TB District planning such as rationales, objectives, approach and its relationship with regular local government planning system, and also the step by step actions in the development process. In Q4, in July, the draft was discussed with NTP team, refined and adopted. The technical guidelines have been shared during the provincial meetings on local government commitment and leadership in TB that involved District Health Office and District Planning Agency. The provincial meeting was then followed up with the commitment from provincial and district government to develop TB district planning that is called Local Action Plan for TB Elimination. Participants of the meeting found that the technical guidelines were useful and needs to be formalized.

Besides that, the template and matrix to develop district action plans was made available by August 2016. The document which consists of situation gap analysis, target setting and priority activity selection modules/ tools was used to assist the district to develop their long-term costed plan for 2016-2020 to achieve the district's SPM target and National TB program targets systematically. There were 16 provinces with more than 300 districts engaged by NTP and CTB

partners by end of September 2016. The drafts should be available in December 2016 and district regulation frameworks to support TB control programs will be available a year after.

- Training of Trainers (ToT)

  The NTP has made TB district planning as priority in the National Action Plan for TB Elimination. TB District planning is considered a manifestation of local government leadership and commitment to eliminate TB. NTP and CTB provide technical assistance to the provincial government in this regard, and the NTP collaborated with CTB to establish a National Facilitators team. NTP in collaboration with CTB organized a Training of Trainers for TB District Planning in July and co-facilitated the process.
  The participants of the TOT consist of, MoH team (Sub Dit TB), Global Fund officers, CTB (KNCV, WHO, FHI 360)and NGOs (Aisyiah and LKNU).
  The TOT participants were then assigned to facilitate the provincial meetings on local government commitment and leadership in TB. NTP targeted to cover 34 provinces throughout Indonesia.

- Provincial meeting on local government commitment and leadership on TB

  CTB team is included in the National Facilitators Team, facilitated the provincial meetings. Until the end of September 2016, the meetings were conducted both in CTB areas (North Sumatra, West Java, Central Java, and East Java) and non-CTB areas (Riau, West Sumatra, Banten, Yogyakarta, Bali, North Sulawesi, West Sulawesi, South Sulawesi, and South Kalimantan). In general the meetings had the following broad results:

  a. Current TB situation and program achievement at province level
  b. Understanding on National policy on TB and National Plan of Action
  c. Initial draft of indicators, target and priority activities

  Participants also agreed upon next steps including the following:
  a. Re-check and complete the data related to indicators, targets
  b. Report the result of the meeting to their respective district head for further support
  c. Discuss further the results of the meeting with a broader group of stake holders at local level.
  d. Advocate for the development of District Action Plans for TB elimination

- Further workshop with stakeholders in North Sumatra

  In North Sumatera, both Kota Medan and Deli Serdang District have followed up the TB district planning process. the districts shared widely the concept of TB district planning with their stake holders, including other local government units, professional organizations, universities and NGOs. The idea of having and advocating District Action Plan for TB elimination received positive support from stake holders. The workshop in those two districts has agreed to form working groups for further program implementation.
  Inputs for local government budget revision fiscal year 2017, will be based on the approved TB district planning (District Action Plan for TB elimination) (nearly finalized). A formal discussion for the semi-annual 2017 budget revision will take place in the second semester of 2017 and provides a new opportunity to strengthen district TB planning, Around that time also the planning for 2018 will start

Commemoration of world TB Day 2016

- The Launch of Family Movement towards Indonesia Free of TB.

  For World TB Day, the NTP, CTB and USAID jointly developed a video campaign, involving the NTP, the US Ambassador, and a famous local rock band, SLANK[8], to raise public awareness on TB. The video campaign premiere on March 24th in conjunction with US Embassy's youth event "Let's TOSS to End TB" took place in @america corner under the United States Embassy Jakarta in Pacific Place, Jakarta. In this event, the Embassy of the United States announced their support to

[8] SLANK is an Indonesian rock band with a huge fan following across the country, and mostly teenagers to adults, some of them coming from slum and middle-low income families.

the TOSS TB (*Temukan Obati Sampai Sembuh*, Find Treat and Cure TB) campaign. The participants of the event were high school and university students about 150 persons in total. In addition to the SLANK performance, there was also a panel discussion and Q&A on TB, presented by Sub Directorate TB of MoH, Head of Koja Sub District Public Health Center (Puskesmas), and an ex MDR-TB patient. From this campaign, Challenge TB got approximately 2,000 engagements through the CTB Facebook page and 14,000 engagements during World TB Day on March 24th. And with CTB technical assistance during a Blogger Session on March 22nd held by the NTP, #TOSSTB became one of trending topics of the day.

Secondly, on April 2nd in the Marunda slum area, CTB opened a photo and education booth during the launching of TOSS TB with the *"Gerakan Keluarga menuju Indonesia Bebas TB" (Family Movement towards Indonesia free of TB)* campaign by the Minister of Health, which also was attended by the Governor of Jakarta. After the event, the video campaign is now being used by the Jakarta Provincial Office of Health to promote TB awareness on their electronic banner in public places around Jakarta.

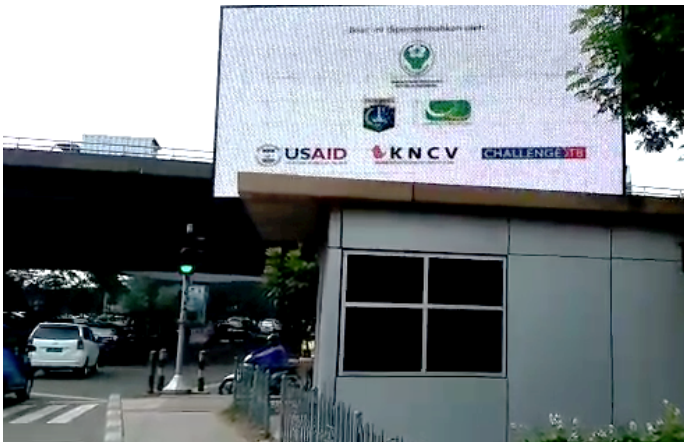


Figure 11. TB Campaign video showed as videotron at Jakarta main street

TB Service Technical Guideline for Public Health Center Accreditation finalized

This guideline is intended to provide Puskesmas accreditation assessors with a tool to measure TB service performance in Puskesmas. Furthermore, Puskesmas can use this guideline to prepare themselves to meet accreditation standards for TB services. NTP, Indonesia Association of Internists (PAPDI), and Pulmonologist (PDPI) supported by CTB have developed the draft of TB Service Technical Guideline for Public Health Center Accreditation since June 2015. In APA 2, the guideline was finalized and is now ready to disseminate.

Patient group empowerment

CTB continued its support of the expansion of patient groups, activities facilitation, and organizational or personal capacity development for its members. In this year, one new patient group has been established in Jember, East Java, named SEKAWAN, which brings the total number of patient groups to 8 (PESAT (formerly PEJABAT) in North Sumatra, SEMAR in Central Java, PETA in DKI Jakarta, PANTER and REKAT in East Java, KAREBA BAJI in South Sulawesi, and TERJANG) with a total membership of 113. Currently 7 of out 8 patient group have been legalized, and already have been linked to funding from GF, USAID (through CEPAT), and private sector donations. Four already access some district subsidies.

Furthermore, in August 2016, CTB facilitated a national workshop in which the 8 patient organizations joined forces and established a national TB patient organization (POP TB). POP TB aims to provide a platform for the voices of TB patients, represent TB patients in national level discussions and forums, contribute to planning and decision making and to participate in monitoring the implementation of national policies. POP TB also aims to promote and facilitate the establishment of more local TB patient organizations all over Indonesia and to build the capacity of its members.

Table 17. Patient Group Nationwide

Name of Patient groups/ Peer Educator (PE)	Number of member	Legalization status (year)

PETA (Jakarta)	35	2014
PANTER (Surabaya, East Java)	10	2016
REKAT (Malang, East Java)	15	2015
SEMAR (Central Java)	16	2016
PEJABAT (Medan, North Sumatera) sekarang PESAT	10	2016
SEKAWAN (Jember, East Java)	12	On process
Kareba Baji (Makassar, South Sulawesi)	15	2016
TERJANG (Bandung, West Java)	11	2016

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	**Y**
	7.2.1. of NTP budget financed by domestic resources	Description: This indicator measures the percent of the NTP budget financed by domestic sources Indicator Value: Percent Level: National Numerator: The amount of NTP expenditures from domestic sources during reporting period Denominator: Total NTP expenditures in the period	Not Available	TBD	Unavailable
	7.2.3. Percent of activity budget covered by private sector cost share, by specific activity	Description: This indicator measures the proportion of CTB project activity budget covered by private sector cost share (if not monetary, will require estimation of costs) by specific activity. Indicator Value: Percent Level: Nationally for activities at national scale and in Challenge TB geographic areas for activities focused in specific geographic areas where Challenge TB is working. Numerator: Amount of private sector cost share covering CTB project activity during most recent fiscal year Denominator: Total CTB project activity budget plus private sector cost share amount during the year of assessment.	Not Available	Not applicable to set target	Unavailable

Sub-objective 8. Comprehensive partnerships and informed community involvement8. Comprehensive partnerships and informed community involvement8. Comprehensive partnerships and informed community involvement

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	**Y2**
	8.1.3. Status of National Stop TB Partnership	Description: This indicator measures the status of National Stop TB Partnership by using special questionnaire for collecting relevant country level data Indicator Value: The score based on below: 0= no National Stop TB Partnership exists 1= National Stop TB Partnership established, and has adequate organizational structure; and a secretariat is in place that plays a facilitating role, and signed a common partnering agreement with all partners; but does not have detailed charter/plan, and does not meet regularly/ produce deliverables; 2= National Stop TB Partnership established, has adequate organizational structure and in a participatory way has developed detailed charter/plan, but does not meet regularly and does not produce deliverables; 3= National Stop TB Partnership established, has adequate organizational structure, has developed detailed charter/plan, meets regularly and critical deliverables are produced Level: National	1= National Stop TB Partnership established, and has adequate organizational structure; and a secretariat is in place that plays a facilitating role, and signed a common partnering agreement with all partners; but does not have detailed charter/plan, and does not meet regularly/ produce deliverables;	Not applicable to set target	1=National Stop TB Partnership established, and has adequate organizational structure; and a secretariat is in place that plays a facilitating role, and signed a common partnering agreement with all partners; but does not have detailed charter/plan, and does not meet regularly/ produce deliverables
	8.1.4. of local partners' operating budget covered by diverse non-USG funding sources	Description: This indicator measures the proportion of CTB project local partners' operating budgets covered by non-USG funding sources. A special questionnaire for collecting relevant country level data among CTB local partners is available. Indicator Value: Percent Level: Challenge TB geographic areas Numerator: Amount of CTB local partners' operating budgets covered by non-USG funding sources (TGF, WB, EU, ADB, DFID, private donations, investment income, other revenue, etc.) Denominator: Total operating budget of CTB local partners' operating budget (USG + non-USG sources) during the year of assessment.	Not Available	Not applicable to set target	N/A

	8.2.1. Global Fund grant rating	Description: This indicator presents Global Fund TB grant performance rating results Indicator value: Score is based on the following: A1 Exceeds expectations A Good performance A2 Meets expectations B1 Adequate B2 Inadequate but potential demonstrated C Unacceptable Level: National	(July-December 2014) Aisyiya: A1 MoH: B1	Not applicable to set target	(Jul-Dec 2015) Aisyiyah: A1 MoH: B1

Sub-objec 9. Drug and commodity management systems9. Drug and commodity management systems9. Drug and commodity management systems

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	**Y2**
	9.1.1. Number of stock outs of anti-TB drugs, by type (first and second line) and level (ex, national, provincial, district)	Description: This indicator should be used to report the number of stock outs of any type of TB drug at any level of the health system that results in interruption of treatment. Indicator Value: Number Level: This indicator should be reported at whatever level a stock out that results in interruption of treatment occurs.	SLD: 0 (2014) FLD: 2 districts: 1. Jember (TB drug for children) 2. North Jakarta (2nd Category)	Not applicable to set target	(Oct 2015-Jun 2016) FLD: Cat 1: 0 districts Cat 2: 1 districts (Bandung City) Anti TB drugs for children: 0 districts SLD: 0

Sub-objective 10. Quality data, surveillance and M&E

In APA2 CTB addressed gaps in data quality, surveillance, and interoperability with close coordination at national level and jointly in the NTP national IT/Data Management steering committee (beyond the current NTP Surveillance Team capacities and mandate) for HIS and support systems for implementation of mandatory notification.

CTB assisted in the identification of minimum notification/reporting requirement for private sector notification and collaboration in the NTP. CTB also assisted the NTP to assess the functional requirements for a unified electronic TB recording and reporting system for TB surveillance and TB program management. This included an analysis of the needs of the NTP and stakeholders, implemented by the CTB and NTP surveillance teams during the fourth APA2 quarter. This effort will be finished by November 2016.

Key Results

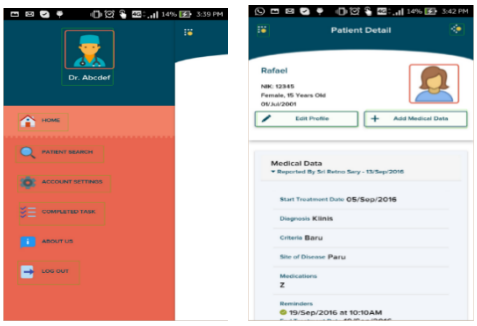
New Regiment used

Bedaquiline (BDQ) is a new anti TB drug used in Indonesia since September 2015. CTB supported NTP in piloting Bedaquiline in 3 PMDT sites (Persahabatan Hospital in DKI Jakarta, Hasan Sadikin Hospital in West Java, and Dr. Soetomo Hospital in East Java), and one site as pharmacovigilance data comparator at Labuang Baji Hospital, South Sulawesi. CTB is monitoring the pharmaco vigilance (PV) data collection for the bedaquiline (BDQ) implementation project and provided recommendations to improve the system. Up to September 2016, 44 of pre-XDR and XDR-TB patients used bedaquiline as a part of the patient's treatment regimen. Of these, the mean age at admission was 40 years on averages (min 18, max 63); 26 were male and 18 were female; drug resistance patterns included: 22 MDR, 18 pre-XDR and 4 XDR. Among 28 patients with positive culture results at the beginning of the treatment, 19 (73%) patients have already had culture conversions with a mean duration of conversion of 75±42 days and time to smear negative of 99±59 days. The most common side effects according to WHO Adverse Reaction Terminology (WHO-ART) were cough aggravated, nausea aggravated, dyspnoe aggravated, pain and vomiting aggravated, with the average of time to first adverse event of 19±27 days.

Active PV system established

CTB has supported NTP and the Food and Drug Agency (BPOM) to finalize the CEM PV guideline and training material, and conducted two rounds of trainings. Funding support for PV introduction came from GF (PR MOH and PR HSS) and CTB. CTB also support NTP in developing functions in eTB manager to record pharmacovigilance of new drugs (Bedaquiline, Clofazimine and Linezolid)and regimens including regular data monitoring in line with WHO definitions.

Figure 12. Sample of feature in the MN mobile, Doctor and patient information



Mobile application for mandatory notification

CTB facilitated NTP for developing a simple and user friendly RR software. The beta version of mobile application has been develop and a UAT (User Acceptance Test) by internal CTB staff was conducted. The application is ready for piloting in APA3. This mobile apps simplifies the notification process, so that General Practitioners can notify TB cases easily. It is expected to contribute to increased notification of cases.

GeneXpert and eTB manager connected

CTB provided support to integrate GeneXpert machines and eTB Manager using GxAlert. CTB also provided barcode scanners, printer to optimize the function of the integration. With this integration, the result of Xpert MTB/RIF test is automatically inputted into eTB manager software. GxAlert also has the capability to send Xpert results through sms and email address to all stakeholders. With this approach the results of Xpert machines will be accurate and received quicker by doctors and patients. At this moment the data connection between e-TB Manager and GxAlert servers has been connected using "dummy-data". In APA3 real integration from Laboratories and Hospitals using GxAlert will operate fully in selected sites.

Recording and Reporting (RR) Form in line with new definitions from WHO

CTB provided TA to adjust paper based forms for TB cases recording and reporting to be in line with WHO definitions. The updated forms have been officially distributed to Provincial Health Offices in the end of 2015. CTB also supported the NTP with the adaptation of the electronic R&R system (SITT), bringing the SITT in line with WHO revised definitions, based on the revised paper forms CTB also provided TA to adjust electronic based forms in SITT.

Study on optimal algorithms for Intensified Case Finding

Passive case finding through public and private health care providers is estimated to find only 60% of the TB patients. Therefore, active case finding approaches are needed. An ICF OR meeting in April 2016 discussed enhanced case finding methods, optimal identification of risk groups, a study design to identify the best choice of algorithm for each risk group and the place of the study.

The OR for ICF will be implemented in two phases. Phase I (planned under APA3) will collect data on the most optimal combinations of symptoms and characteristics of Puskesmas clients that will submit specimens for diagnostic testing. The outcomes of phase I will define the algorithms to be tested in phase II (intended to be implemented under APA4). This Phase II will focus on the feasibility, acceptability and cost-effectiveness of implementing optimized symptom-risk group combinations for screening of clients of Puskesmas and to assess incremental yield in case notification.

TB Surveillance system strengthened

CTB provided TA to **develop country ME and HIS plans**. The ME plan, one of the GF grant conditions ready by May 2016. The data management steering committee was established under leaderships of NTP ME team. The draft master plan for the improved TB information systems was finalized and in principle agreed by the NTP. The development of a smart phone solution and SOP's, using 9 data elements to facilitate implementation of the mandatory notification by private sector providers is an ongoing process.

CTB also support well-functioning quality data systems at National and sub-national level especially in CTB supporting areas. CTB provide supports to maintain the functioning of current systems, until the new comprehensive system is fully operational and transitioned. New updater 10.03A already launched which include bugs solving and adds several new functions.

ETB are in line with WHO definitions. All CTB data indicators including pharmacovigilance, DR-TB cases, Drug and lab supplies availability, adverse drug reaction data, are now available through ETB manager.

CTB continued to assist revision and updating of SITT to comply with the latest country policy changes; also CTB provided TA to the NTP and the local software developer to adjust SITT to reflect the latest WHO definitions.

CTB staff also assist NTP to facilitate IT training for new TB staff members and initiate capacity building activities for provincial or district TB officers in order to be capable in light maintenance and problem solving for SITT and ETB.

CTB also provide technical assistance for the implementation stage of DR-TB survey and the inventory study. Pilot study for both surveys was conducted in August-September 2016. CTB also provided limited IT solution to support the surveys.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	**Y2**
	10.1.4. Status of electronic recording and reporting system	Description: This indicator measures the status of electronic recording and reporting (ERR) Indicator value: Score based on below: 0=R&R system is entirely paper-based; 1=electronic reporting to national level, but not patient/case-based or real time; 2= patient/case-based ERR system implemented in pilot or select sites (TB or MDR-TB); 3=a patient/case-based, real-time ERR system functions at national and subnational levels for both TB and MDR-TB; 4= a patient/case-based, real-time ERR system is functional at national and subnational levels for both TB and MDR-TB completely and meets WHO standard for TB surveillance data quality - i.e., data in the national database are accurate, complete, internally consistent, within timelines set, validated and free of duplicates and a data quality audit system is put in place (source: Standards and Benchmarks for Tuberculosis Surveillance and Vital Registration Systems – Checklist and User Guide, WHO, 2014). Level: National	3=a patient/case-based, real-time ERR system functions at national and subnational levels for both TB and MDR-TB	3=a patient/case-based, real-time ERR system functions at national and subnational levels for both TB and MDR-TB	3=a patient/case-based, real-time ERR system functions at national and subnational levels for both TB and MDR-TB
	10.2.1. Standards and benchmarks to certify surveillance systems and vital registration for direct measurement of TB burden have been implemented	Description: National TB surveillance system is certified based on WHO standards and benchmarks for TB surveillance and vital registration systems (for paper-based or electronic systems). For a country's TB surveillance systems to be certified as providing a direct measurement of TB cases and TB deaths, all 10 standards and their associated benchmarks (Part B, Section 1) should be met (source: Standards and Benchmarks for Tuberculosis Surveillance and Vital Registration Systems – Checklist	No	Not applicable to set target	N/A

		and User Guide, WHO, 2014). The country standards and benchmarks score will be monitored as a sub-indicator to track progress. Indicator Value: Yes/No Level: National			
	10.2.6. Percent of operations research project funding provided to local partner (provide for each OR project)	Description: This indicator measures the proportion of Challenge TB-supported operations research project funding provided to local partner(s), by each OR project. Indicator Value: Percent Level: Challenge TB geographic areas Numerator: Amount of operations research project funding provided to local partner by Challenge TB during a year Denominator: Total Challenge TB operations research budget during the year of assessment.	0	Not applicable to set target	N/A
	10.2.7. Operational research findings are used to change policy or practices (ex, change guidelines or implementation approach)	Description: For all Challenge TB-supported operation research projects implemented in a country, results of these projects are used to change policy or practices (ex. change guidelines or implementation approach). Relevant data are collected/ presented for each individual project by special report with qualitative details. Indicator Value: Yes/No Level: National	NA	No	N/A

Sub-objective 11. Human resource development11. Human resource development11. Human resource development

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y2	**Y2**
	11.1.3. # of healthcare workers trained, by gender and technical area	Description: This indicator measures the number of healthcare workers (which includes health facility staff, community health volunteers, laboratory staff, sputum transport technicians, community-based DOTS workers) trained, by gender and sub-objective. Training includes any in-person, virtual, or on-the-job training that is longer than half a day and for which curriculum is available. This indicator is interchangeable with 'Number of individuals trained in any component of the WHO Stop/End TB Strategy with USG funding' which USAID missions may have as a requirement for internal agency reporting. Indicator Value: Number Level: National and Challenge TB geographic areas Numerator: Number of HCWs trained during the reporting period	CTB activities will be decided after HRD assessment	Not applicable to set target	798 (M:320;F:478) (APA2) SO 1: M:36; F:84 SO 2: M:86; F:155 SO3: M: 45; F:106 SO10: M: 153; F: 133
	11.1.5. Percent of USAID TB funding directed to local partners	Description: This indicator measures the proportion of CTB annual funding directed to local partners Indicator Value: Percent Level: National. Although CTB may be working with local partners in specific geographic areas, the overall total going to local partners at any level should be included in the numerator and compared to the overall country budget. Numerator: Amount of CTB country project funding directed to local partners during the most recent fiscal year Denominator: Total CTB country project budget during the most recent fiscal year.	0	Not applicable to set target	N/A

4. Challenge TB Support to Global Fund Implementation

Current Global Fund TB Grants

Name of grant & principal recipient *(i.e., Tuberculosis NFM - MoH)*	Average Rating*	Current Rating	Total Approved/Signed Amount**	Total Committed Amount	Total Disbursed to Date
IND-T-MOH	B1	No rating	$ 63,337,280	$31,721,848	$17,377,744
IND-T-AISYIYA	A1	No rating	$ 21,200,718	$11, 375, 606	$4,178,315

** Since January 2011*

*** 2016-2017 NFM grant*

In-country Global Fund status - key updates, current conditions, challenges and bottlenecks

The Global Fund's New Funding Mechanism (NFM) project 2016-2017 was officially launched in January 2016 with the title "toward an Indonesia free of tuberculosis". It is implemented by two principle recipients (PRs): The Ministry of Health (NTP-MoH) with a total signed amount of USD 63,337,280 and a large local FBO named Aisyiyah (representing several CSOs), with a signed amount of USD 21,200,718, both for the period till end 2017.
Indonesia has the second largest Global Fund TB allocation in Asia at USD 122 million over 2014-2017. However, the disbursement till2015 was only 30%, and disbursement for the period 2016-2017 only started in February 2016.

In addition, delays occurred in the NTP contracting the new Cepheid service provider for maintenance and calibration of GeneXpert machines, due to too high costs proposed by the service provider, resulting in many dysfunctional machines; as a result of this and other factors, by the end of March less than 400 MDR-TB patients were enrolled nationwide in 40 MDR-TB treatment (referral) centers, with the annual target for 2016 being over 4,000 MDR patients. Also HIV testing and ARV provision indicators showed little progress

The low spending rate and low performance on all indicators prompted a high level mission of GDF and the Stop TB Partnership (STP) to the Ministry of Health of Indonesia. This resulted in a decision to accelerate the utilization of the GF grant through reprogramming, especially aiming at increased notification of TB, MDR TB, TB HIV and increased ARV treatment provision for patents with TB/HIV. Driver of most of the expected improvement in grant performance is accelerated and increased deployment of Xpert machines aligned with expanded capacity for the programmatic management of drug resistant TB. This massive scale-up of diagnosis and treatment of MDR TB would be greatly facilitated by the introduction of the shorter MDR treatment regimen and would allow the country to achieve 2017 targets (~5000 patients enrolled), from a mere 1580 in 2015.

Since April CTB pro-actively supported the reprogramming and consecutive implementation of the agreed acceleration plans:

1) CTB took the initiative to establish a bi-weekly tele conference between the GF country team for Indonesia and the Indonesia PR's and their main technical partners, to ensure close collaboration and optimal support to the acceleration process,. The group consists of the NTP, since September also Aisyiyah and their key partners KNCV, WHO and the in-country international laboratory consultant. Other partners join this TC when necessary. This initiative has shown to be successful in speeding up procurement of Xpert machines, while preapraing placement and implementation

2) CTB supported planning and co-facilitated the training of trainers for national and regional training teams for Xpert utilization

3) CTB took the initiative to involve the local service provider and Cepheid directly in the planning to improve their services and prepare for installation of 300 new machines. This resulted in Cepheid-India coming to Indonesia and train additional technical staff for the installations, due in the fourth quarter of 2016

4) CTB contributed to the development of the new diagnostic approach that is expected to increase TB as well as MDR TB notification, using an "Xpert for all" (presumptive TB) algorithm in clinics where Xpert is available, while continuing Xpert for risk groups only to be continued in all other diagnostic sites (with a differentiated approach to ensure the quality of SS examination in these different situations). Since May the NTP has been promoting the use of the new algorithm; the ministerial decree making this the standard approach is to be signed soon and will allow eventual inclusion of Xpert in the standard equipment of hospitals and health centers.

5) CTB contributed to the development of a draft implementation plan for shifting to the shorter MDR treatment regimen by July 2017, allowing one year for preparation, use of existing drugs, and procurement of replacement drugs. The plan provides for shifting to a full patient triage approach by July 2017 using the STR as the standard treatment, including the use of SL LPA (starting end 2016) and new drugs containing treatment (since 2015, with CTB support in 2015).

6) CTB provided TA to the quantification of cartridges and medicines for the introduction of the shorter MDR treatment regimen and initiated the discussions with the GDF on the introduction of the shorter regimen in Indonesia to cancel an expected order and find solutions for redundant drugs. These discussions were necessary as just prior to the WHO approval of the shorter regimen the country had decided to place a large order of SL drugs, including some drugs which are not part of the shorter regimen, which was processed, before the final decision on the introduction of the shorter regimen was taken. After deciding on introducing the shorter regimen fortunately part of the planned order could still be cancelled. Some of the redundant drugs can be used in-country, but much of the cycloserine is likely to expire, unless it can be diverted to another country.

The reprogramming process until approval took approximately the whole third quarter of 2016, but pre-approvals from the GF country team ensured spending levels already increased during this period, mainly due to procurement of the Xpert machines and trainings. Of course the effect of all measures on the performance indicators is only expected to become visible over the 4th quarter of 2016 / beginning of 2017.

Challenge TB involvement in GF support/implementation and any actions taken during Year 2.

CTB partners assist the GF PRs to complete all required documents for Grant Agreement process on time. The GF Country team had accepted all required documents and compiled it for GAC II at end of November 2015. The final decision of GF Board has taken at 5th January 2016 of which approved the final grant documents. The last stage to finalizing the Grant Confirmation agreements for signature by the PRs was completed at February 2016. The Global Fund Country Team proceed with the first annual funding decision and disbursement at March 2016, based on the approved grant budget, and taking into consideration any conditions or management actions included in the grant agreement. With one quarter delays on disbursement, CTB provide assistance to PR to reprogram their initial plan.

In April a high level combined STP/GF mission to Indonesia voiced their concern on the under spending of the Global Fund (GF) TB grant and underperformance on GF targets, especially on TB case notification, MDR-TB and TB/HIV. This was putting Indonesia is at risk to lose up to 20 million USD over the period 2016-2017, which is also expected to decrease the level of the allocation for the consecutive period. CTB took the initiative to facilitate bi-weekly meetings between the GF country team and the NTP, with participation from the CCM vice chair, WHO, KNCV, and others as relevant and to support the NTP in implementing the action points agreed during these meetings. This already resulted in an accelerated MDR response in the country (procurement of 200 additional Xpert machines, expansion of the diagnostic algorithm, training of Xpert teams and planning for scale-up and decentralization of PMDT), rescheduling of the GF grant and an improved GF utilization rate. The CTB support in these fields is crucial as mitigating action for the risks identified by the GF Geneva Risk Team as discussed during the visit on June 2nd by the Global Fund Secretariat Risk Management team.

The unavailability of human resources for follow-up of monitoring and support to quality implementation of GeneXpert roll-out and PMDT scale-up is worrying. CTB together with the NTP (GF resources) is training provincial GeneXpert teams (over 40 teams in 34 provinces) and under APA3 willmotivate and facilitate the provincial health offices to appoint additional PMDT coordinators. These coordinators will lead multi-sectoral PMDT teams to support the uptake of GeneXpert testing and quality of PMDT during scale-up. These will be trained by CTB and NTP in supervision and guidance for PMDT scale-up.

Starting from April to September 2016, GF requested country to speed up implementation and absorption of NFM grant. With total of almost USD 88 million need to be spend in less than 21 months, TB PR's need to revise and reprogram its funding by identify several strategic investment which can boost funding absorption but also ensuring contribution for target achievement. GF and NTP agreed that strategic investment for TB is rapid expansion and utilization of GX machines. CTB assist NTP and PR's to re-calculate, designing new approaches and reprogramming GF grants. By end of September 2016, the reprogramming have been accepted by GF and reviewed by country LFA.

TB-HIV National Action Plan Dissemination

CTB provided technical assistance in drafting the content of TB/HIV collaborative material and delivered presentations for TB-HIV capacity building workshops as part of a broader introduction to the GF supported workplan. The team also supported NAP and NTP to facilitate the dissemination of TB-HIV National Action Plan in the workshop as one part of the New Funding Model in country. This workshop involved 5 GF PRs (NTP, NAP, NAC, Spiritia and Aisiyah). Participants from 141 districts in 34 provinces were divided into 3 batches of workshops.

Joint TB and HIV Program Monitoring & Mentoring

CTB joined GF-supported teams from NTP and NAP in the monitoring and evaluation of TB-HIV in Papua province and provided program monitoring of TB-HIV in West Papua and South Sulawesi. The result/findings from this monitoring trip become input and material for discussion at the national level TB-HIV technical working group to evaluate the national policy and develop strategy for quality improvement of TB-HIV activities at health facility level.

TB and HIV Infection Control Workshop for ART referral hospitals

CTB team provided technical assistance as facilitators at the workshop of TB and HIV Infection Control for ART Referral Hospitals. This GF supported workshop was held to improve the implementation of TB and HIV infection control within HIV services. Participants included the head of theInfection Control committees and the head of care, support and treatment (CST) clinics from 34 provincial ART referral hospitals and 10 puskesmas in Jakarta Province, which are already independent ART sites. This meeting provided input to the draft Ministry of Health Decree for Infection Control implementation in TB-HIV services, identified needs and funding sources, developed SOPs in TB and HIV services related infection control implementation and raised the issue of barriers to implementation in health facilities. As a next step, CTB will coordinate with NAP/NTP and the Health Service Directorate to finalize the ministrial decree and disseminate it to all health facilities in CTB districts.

TB in Prison

The Global Fund Performance Indicator and score per 30/6/2016 for Indonesia shown that TB case finding in prisons, under the indicator of "DOTS-6: Number of TB cases (all forms) notified among key affected populations/high risk groups" has reached over the target (98% = 210/2016).

- Finalized the National Action Plan for TB & HIV-AIDS for Inmates 2015 – 2019.

CTB team together with NTP and NAP supported DG of Correction to finalize the National Action Plan TB & HIV-AIDS for Inmates 2015-2019. This book consists of strategy for TB and HIV-AIDS control in the correctional facilities. Meetings were cost-shared between CTB and GF.

Figure 13. Cover book National Action Plan TB & HIV-AIDS Control for Inmates, 2015 - 2019

- Prison cadres training on Cough surveillance

The best practice of cough surveillance during TB CARE has been expanded by the MoLHR through health cadres training on cough surveillance funded by the Global Fund budget. Nationwide, 20 prisons/DCs has used this budget, in which 5 of them are prisons in CTB districts. In APA3, TA on cough surveillance in CTB prisons will be conducted.

5. Challenge TB Success Story

Psychosocial support from ex-patients motivates patients to return to treatment

Sticking to the long and toxic treatment necessary to treat drug-resistant TB (DR-TB) is very hard, and DR-TB patients who have been cured can play an important role in helping others complete their treatment. Those who have managed to complete their treatment have been in the same shoes, they can empathize and they can give the advice and encouragement it takes to get through the often painful experience.

The factors that influence a patient's ability to complete their course of treatment, are its long duration and side effects, the distance from their home to the health facility where they are treated, and perhaps most important a lack of emotional support.

The USAID funded Challenge TB project supported the establishment of voluntary based organizations whose members have either been cured or have nearly finished treatment and are no longer infectious. The volunteers are trained to share information on TB prevention of transmission and treatment, to support patients in completing their treatment, to build bridges between patients and health care providers, and to visit DR-TB patients who have failed to turn-up for treatment.

So far more than one thousand DR-TB patients in five CTB provinces have received support through hospital visits since the program began. Hospital visits provide support to DR-TB patients who are starting treatment.

Home visits were implemented for DR-TB patients who failed to turn-up for treatment or showed signs of giving-up on treatment. Out of the 108 DR-TB patients who were visited at home, 59 of them have since resumed their treatment. DR-TB patient Pak Sugiran had stopped coming to the hospital for treatment, but started again after being visited at home, he said: "I had changed to traditional medicine, but began to cough up blood and was hospitalized for three months. The support I received got me back on the proper treatment".

Nationally, there are now 28 former patients who have been trained to assist in training healthcare workers to support DR-TB patients, and 32 who have been trained to share the knowledge from the local groups and to train other former patients.

In August 2016, Challenge TB facilitated a national workshop in which the eight patient organizations joined forces and established a national TB patient organization 'POP TB'. The organization aims to provide a platform for the voices of TB patients, represent TB patients in national level discussions and forums, contribute to planning and decision making, and to participate in monitoring the implementation of national policies. POP TB also aims to promote and facilitate the establishment of more local TB patient organizations all over Indonesia, and to equip the members with the skills necessary to support even more patients through their treatment and back to full health.

Figure 14. Patients and health care workers after a Focus Group Discussion on MDR-TB treatment adherence (Photo: Trishanty Rondonuwu)

Indonesia - Faster test results means faster treatment initiation

Indonesia is the world's largest island country, with more than thirteen thousand islands and a population of over 260 million people. With such a large population scattered over a huge area, the number and quality of health facilities and laboratories is crucial, especially for a country with second highest level of TB in the world.

Sumatra is the sixth largest island in Indonesia, but before May 2016 they did not have certified laboratory to test for second-line TB drug susceptibility. Drug susceptibility testing (DST) determines which drugs the TB bacteria in a patient are sensitive to, and therefore whether the person has drug-resistant TB. It is important to discover if a patient has drug resistant TB as soon as possible, so that they can be provided with effective TB treatment and to reduce the risk of transmission to others.

Before 2016, only five TB Laboratories in Indonesia were certified for second-line DST and four of them were on Java Island. When testing was required specimens were sent to a TB Laboratory in Bandung City, which not only took a very long time, but was also very expensive. In addition, once the specimens arrived at the laboratory there was also a long queue, and it could take more than three months until the results were available. Such long periods of time mean untreated patients can pose a serious risk to both their family and community.

The USAID funded Challenge TB project worked in collaboration with National Reference Laboratory, to renovate the Adam Malik Hospital in Medan, North Sumatra. The laboratory is now a biosafety level two plus facility, and the laboratory and its staff are certified to perform DST for second-line TB drugs.

With this certification, the TB Laboratory can examine not only the specimens from the Adam Malik Hospital but also those from health facilities the 33 cities/districts across Sumatra, and most importantly, it takes less than 23 days to get the results. This means TB patients can be put on the correct medication more quickly and reduces the risk of them infecting those around them. Challenge TB support has brought hope to thousands of TB sufferers in Sumatra and is one more step in reducing the burden of TB in Indonesia.

Figure 15. CTB and NRL conducted on the job training in C/DST examination at Adam Malik Hospital Laboratory. Credit photo: Roni Chandra

6. Operations Research

Title of OR study	Local partners involved in study	Implementation Status	Key findings	Dissemination
Tuberculosis case yield of risk group screening using optimized screening and diagnosis algorithms in Indonesian community health centers: a cluster-randomized study	TORG and local universities	NTP and TORG have agreed with the design of the study, i.e. 2 phases study. Aim of phase 1: to collect data on most optimal combinations of symptoms and characteristics of Puskesmas clients that should submit specimens for diagnostic testing. Aim of phase 2: to assess the feasibility, acceptability and cost-effectiveness of implementing optimized symptom-risk group combinations for screening of clients of PKM and assess the incremental yield in the case notification. Current status: protocol development. Implementation of phase 1 to be expected during APA 3 (after USAID approval trough PMU)	N/A	N/A

7. Key Challenges during Implementation and Actions to Overcome Them

Challenge	Actions to overcome challenges
Technical	
The changes on NTP leaderships which caused delays, shifting approaches and priorities.	Need more approaches and discussion with new NTP managers and head of sections, including re-briefing and re-explaining details of each activities and plans. Look at the commonality of ideas, rewording or rebranding the ideas to be in line or acceptable with new NTP leadership approaches and priorities.
The changes on GF Country team structures which more keen and committed to support country to move faster on implementation and grant absorption.	Facilitate more frequent discussion between NTP, PRs, CT GF and TB TWG/ CCM to overcome the issues and bottlenecks. More intensive support to both TB PRs to prepare rapid responses to GF CT request for clarifications, documents, etc.
Delays of activity implementation of which required or related with work plan targets or milestones	Deep discussion with NTP and Global Fund for shifting the activities or to seek another possible resources. Integrated the activities agenda in to other activities delivered by NTP, Provinces, GF or another sources.
Update policy and strategy are not well disseminated to field level staffs or health providers	CTB need to establish line of communication between central level team to province/ district team to back up traditional NTP line of communication.
Administrative	
Low budget absorption due to the delays due to Individual Agreement signing	Frequent visits to NTP and effective conttribution to National Action Plan which led to good relationship building with NTP managers. Establish a good collaboration and relationship with PHO,DHO and Professional Organization to get their administrative facilitation for several activities.
Delay on APA 2 workplan implementation, due to approval of the workplan received in February 2016	With NCE budget of APA I, some routine activities and related to APA 2 were conducted with 3 months workplan extension. Identify partners (NTP, DHO, PHO) if the activity can be funded/ facilitataed from their budget (GF or Goverment budget), then CTB staff can supported as technical assistance.

8. Lessons Learnt/ Next Steps

The biggest challenge for Indonesia is notifying and effectively treating the estimated 680,000 missed patients annually (WHO Global TB report 2016), among whom approximately 14,000 are MDR patients. Among the 330,729 TB patients diagnosed and notified in 2015 an estimated 10,000 were MDR/RR-TB of whom 2,163[9] (21%) were actually diagnosed and only 1,541[10] received treatment. While the private sector is estimated to treat a number of TB patients approximately equal to the public sector, these patients go largely un-notified and the quality of diagnosis and treatment is not assured. One third of patients are not seeking any form of organized medical care, as socio-economic factors and TB stigma are still important barriers to care and treatment adherence. With the optimistic target to notified more cases at least 445,000 in 2017, NTP enforce to not only actively but massively to get more cases. Therefore, in APA 3 CTB main focus in increasing the TB case notification at least 10% from the baseline through improving DOTS implementation by public and private sector provides supported by surveillance system.

There are 5 priority strategies during APA 2: the District Action Plan, PMDT expansion, GeneXpert acceleration, TB/HIV collaboration and private providers engagement. Those priorities will be shaped through interventions formulated under 9 CTB sub-objectives:

- Sub-objective 1: Enabling environment
- Sub-objective 2: Comprehensive, high quality diagnostics
- Sub-objective 3: Patient centered care & treatment
- Sub-objective 5: Infection control
- Sub-objective 6: Management of Latent TB Infection
- Sub-objective 7: Political commitment & leadership
- Sub-objective 8: Comprehensive partnerships and informed community involvement
- Sub-objective 10: Quality data, surveillance and M&E
- Sub-objective 11: Human resource development

For APA3, 3 districts in Papua and 3 more districts in Jakarta were added as new CTB areas, overlapping with the FHI360-led USAID funded LINKAGES project, to maximize the impact of both projects. In these district CTB will also benefit from the additional mobilization of community networks by the LINKAGES project and will contribute to the joint TB/HIV diagnostic, treatment and care provision for key populations through optimal use of the Xpert network and provision of HIV testing in TB care facilities followed by referral and treatment follow-up.

SO 1. Enabling Environment

1.1. Provide services according to national guidelines for all care and risk groups.

The approaches are; Strengthening of the management of TB in the private sector. For Mandatory Notification, CTB will organize a stakeholder workshop to agree on introduction of MN model in 4 pilot districts (urban and rural). The notification and reporting on treatment outcomes will be facilitated by a smart phone application, which will also provide the minimal necessary information. CTB will introduce the use of the PSP smartphone app in 2 pilot districts. Lesson learnt from MN pilot feed into national policy and scale-up plans.

Collaboration with JKN will continue with data validation mechanisms between SITB and JKN (BPJS). Hence, the sustainable JKN funding will be linked to quality assurance of TB diagnosis and care. CTB will provide sub-awards to professional societies (national level) to build capacity of their district cadres to fulfill their roll at the district level and develop and kick-start sustainable engagement models to support TB control (any support to district level activities will be part of district plans). As a results sustainable models of public private collaboration will be piloted by 2 professional societies through sub-awards). CTB will support the development of agreements with the NTP and other partners on pricing levels of equipment and consumables for PSP serving Public Health goal. Therefore, the private sector providers (PSP's) will have access to preferentially priced Xpert testing (including GxAlert).

[9] Include XDR= 28 cases (Global TB report , WHO, 2016)
[10] Include XDR: 22 cases (Global TB report, WHO, 2016)

- 1.2 Demand side: community empowered especially among risk groups

In areas where Xpert becomes the primary diagnostic and monitoring of district plans based on empowerment through training and mentoring, community will be engaged. At district level CSOs will also be engaged in monitoring the functioning and utilization of treatment sites, the sputum transportation system and other TB services. Therefore plan CTB will invest in the development of CSO's " TOSS TB" (Temukan, Obati sampai Sembuh TB = Find, Treat and Cure TB) networks at national and provincial level, to prepare effective collaboration at district level planning and implementation through sub-awards to 2 national CSO's

Sub objective 2: Comprehensive, high quality diagnostics

- 2.1Access to quality TB diagnosis ensured

CTB will support the decentralization, roll-out and utilization of GeneXpert platform for MTB/Rif testing (and future utilization for HIV VL and XDR-TB cartridges) and related transportation system. The approaches were: Supporting GX roll-out to districts and selected sub districts and operations by establishment, training and mentoring provincial multidisciplinary lab network task forces, including dissemination and cascade training for use of sputum and TB strain transportation SOPs (using video instruction) (cascade down training from IRLs to districts / Puskesmas is part of GF funding).

CTB will provide support on GxAlert implementation and provision of bar code printers (each sample receiving a barcode at the Xpert site, preventing mistakes in copying handwriting). As a result, by the end of APA3 Xpert results are automatically entered in SITT and eTB manager and provider and patient are notified when results are available. CTB will also support the NTP/MOH to build capacity for information management regarding GeneXpert and supply chain management.

CTB will support the NTP to monitor and regulate the use of serological tests for TB.

TA and implementation support to increase utilization for extrapulmonary TB and to conducting and evaluate a pilot for using stool samples for use in Xpert (results to feed into national policy).

- 2.2. EQA network for lab diagnostics & services functioning

CTB will introduce LQMS system (NRLs, provincial labs, IRLs CTB provinces, districts); LQMS training for the 3 reference labs, support stepwise implementation, assist NTP in lab performance data collection and analysis, supportive supervision, and follow up lab coordination meeting.

To support EQA and capacity building of the sputum smear (SS) network, CTB will provide TA to the assess and map SS network functioning per province, implementation of GLI standards (11). CTB will provide local TA to provincial health offices for SS network development planning and mentoring of provincial lab network task forces to improve quality of the SS network, with emphasis on PMDT sites; revision of eTB 12 to ensure analysis and feedback on EQA performance and revised methods (with SOPs and training package) for sputum smear quality assurance for sites that transition to the use of Xpert as primary test are designed.

- 2.3Access to quality culture / DST ensured

Together with the NTP and the MOH CTB will develop milestones for the transitioning of routine lab development tasks to the NRL's and IRL's, allowing CTB to focus on support to necessary innovations. During APA3 however in the CTB supported provinces CTB support is needed to ensure quality assured diagnosis and treatment follow-up of TB and MDR TB in the framework of the massive national Xpert scale-up, which happens to concentrate in 8 priority provinces, 6 of which overlap with CTB. Therefore, CTB will support the development of SL LPA and enhanced molecular DST and Culture and phenotypic DST.

Sub-objective 3: Patient centered care and treatment

- 3.1 Ensured intensified case finding for all risk groups by all care providers

CTB will provide mentoring PHOs, DHOs and professional societies to ensure uptake of Xpert testing following the updated national diagnostic algorithms and the Xpert roll-out and to closely follow up the yield of SS based and Xpert based diagnosis of TB in districts. CTB will also support on strengthening

of good childhood TB practices: use of Childhood TB benchmarking tool with TWG on Childhood TB, incorporating training module of Childhood TB into the national TB training package; use of childhood TB benchmarking tool to address childhood TB during district assessments and planning For TB/HIV: Together with the Linkages project joint TB-HIV services provision will be piloted, including the combined use and funding of Xpert platforms for MTB/Rif and Viral Load testing (2 districts). Related to DM/TB: Formalization of TWG for DM/TB after piloting DM/TB collaboration model in 2 hospitals and development of 2 demonstration districts for enhanced surveillance to learn lessons to inform expansion phase during the next years. TB in prisons: conversion towards locally owned implementation of comprehensive and equitable TB control in prisons including active and passive case TB finding, treatment of all forms of TB in line with national standards. CTB will develop 2 demonstration districts for contact investigation around DS TB and MDR-TB patients, implementing the draft CI guidelines.

- 3.2Access to quality treatment and care ensured for TB, DR-TB and TB-HIV for all risk groups from all care providers

DOTS strengthening: Eventually quality norms that apply to the public sector will also apply to private sector providers. CTB interventions in this area will mostly take place at the district level. In the public sector, strengthening of basic TB services will focus on increasing notification, completeness and correctness of notification and external quality assurance of diagnosis and treatment as well as linking the unlinked public sector facilities to the NTP. Important tools will be the action oriented use of the Diagnostic Chain Analysis and Quarterly (Interim) Cohort Analysis, improving PMDT management and support capacity). **On PMDT** CTB will support expansion and decentralization of the PMDT network and provision of treatment close to the homes of the patients by GF funding, which is needed to accommodate the GF funded rapid Xpert expansion in 2016/17. With 5 of the 6 CTB provinces being NTP MDR priority provinces, and harboring an estimated 60% of MDR-TB patients of the country, CTB has a real opportunity to contribute to the success of the PMDT scale-up. Engaging national and provincial level teams in CTB demonstration districts will ensure capacity building of the provincial and national teams, allowing for dissemination of CTB approaches across districts and provinces. Private sector providers linking to the DHO and accredited for MDR treatment (see 1.1) will be included the same way as the public sector treatment sites

Sub-objective 5: Infection control

- 5.1Compliance with quality TB-IC measures in health care, community and congregate settings ensured

The PMDT expansion has highlighted the need for TB infection control. While funding for adjustments to prioirty structures is available through global fund and local resources, there still is a lack of understanding (and as a consequence implementation) of managerial measures to prevent TB infections.

- 5.2TB surveillance among HCW ensured

Operationalize TB surveillance among HCW, based on TB CARE I SOPs and pilots: CTB will support a workshop to evaluate the pilots, followed by revision of the model based on the lesson learnt . Once it HCW screening is applied indicator 5.2.3 will be able to be collected.

Sub-objective 6: Management of Latent TB Infection

- 6.1 LTBI diagnosis and treatment among high risk groups ensured

Development of innovations in preventive treatment: preparatory work for introduction of Isoniazide/Rifapentene preventive treatment (once weekly 3 months) in APA4. As Rifapentine(P) is not yet registered and is not produced in Indonesia, the preparations will take time. In district plans: IPT

in children (in combination with CI under 3.1) and promotion of TB screening and LTBI treatment among newly diagnosed PLHIV – district level collaborative TB-HIV activities following district planning.

Sub-objective 7: Political commitment and leadership

- 7.1 In-country political commitment strengthened

CTB will support and facilitate capacity building for district planning at national and provincial level, using the planning in 6 CTB provinces (16 districts) as demonstration sites. National guidelines for comprehensive district TB control planning, developed under APA2, will be finalized using feedback from the CTB districts.

The preparation implementation of CTB-Indonesia Urban TB approach will be conducted;Prepare the use of GIS for mapping of epidemiological hotspots, at risk populations (urban poor, HIV key populations), prepare methodology for mapping of area health-networks and implement model for sustainable public private interfaces (CN, monitoring, training components) in 2 districts.

Sub-objective 8: Comprehensive partnerships and informed community involvement

- 8.1National partnership and coordinating bodies functioning with appropriate representation and capacity

CTB will support the Indonesia Stop TB partnership and the NTP to make an analysis of the TB stakeholders landscape, their policy-influencing potential and TB program advocacy needs and target groups.

CTB will develop advocacy, communication and media strategy with aim to reduce the stigma of TB and increase commitment of all actors to TB control, leading to effective action (increased funding, adequate health seeking behavior, patient centered care). In addition, CTB will develop its own advocacy, communication and media strategy in support of the implementation of effective strategies as formulated in the APA3 plan and expansion of effective strategies developed under APA3.

CTB will participate in the JEMM in preparation of the new GF concept note development

8.2 Global Fund grant ratings improved

To support utilization of GF funding and leveraging additional international funding for effective TB control in Indonesia: CTB will establish coordination with all PRs: MOH and Aisyiyah; collaboration with CCM, TWG on TB, WHO, and the USAID consultant for the laboratory network.

CTB will step-up its TA to GF program management and quality assurance of the 4 main GF supported interventions: Xpert roll-out, PMDT scale-up and organization of adequate patient support and improvement of notification, taking into account long term sustainability requirements from the NTP/Gov of Indonesia.

Strengthening of GF grant management: in addition to the activities under 2.1 (Xpert roll-out) and 3.2 (PMDT) CTB will continue to participate and contribute to Sub CCM meetings and support the PRs during fortnightly GF CT teleconferences, shepherding and facilitating the ensuing actions and decisions. CTB will conduct advanced training on project management, project risk assessment and mitigation to CTB project management staff and the NTP Global Fund management group, including also the screening of possible sub-awardees and contract oversight.

Closely follow-up the requirements for concept note development (2018-2020) and arrange for adequate support to the planning process and CN development that should take place over the course of 2017. (workshops to plan the planning (Q1) and the planning itself Q1,2). An epi-review will be required for CN development - the epidemiological assessments and modeling (10.2) for district TB control planning in 2016-2017 will feed into this epi review facilitating prioritization of interventions. One complementary Epi assessment mission will be included in the APA3 Global Fund Hub planning.

Sub-objective 10: Quality data, surveillance & M&E

- 10.1 Patient-based electronic recording and reporting system is in place

CTB will conduct the preparatory workshop to define the scoping of the new SITB (requirements to the system) and defining the study questions for the India visit as well as dissemination of results of the study visit to define the final scope of the new electronic recording and reporting system and the next steps. Besides, CTB will support on update the package of functional requirements and specifications for the new SITB, based on a comprehensive stakeholders consultation that will have taken place under APA2 (workshop of stakeholders).

CTB also will support to planning of SITB development and participation in steering committee for overseeing the development of the SITB (TA to planning); Strengthening of collection of routine program performance per CTB district / province: Support establishment of provincial HIS team for troubleshooting (ToT) and strengthening surveillance system by supportive supervision in CTB areas; and support NTP for inter-operability SITT & eTBM with SIHA piloting of app for electronic RR for Mandatory Notification; inclusion of eRR elements on TB among HCWs and maintain CEM PV system in eTB manager for BDQ implementation, and inclusion of aDSM. Benchmarking of the surveillance system will be done in the framework of the WHO/KNCV epi assessment prior to the JEMM in preparation of the new GF Funding Request.

- 10.2 Epidemiologic assessments conducted and results incorporated into national strategic plans

CTB will support the development and consequent deployment of the rapid district level modeling tool in collaboration with the NTP and LSHTM. Concurrently and in synergy CTB will support the application of TIME to model the epidemic and major interventions, capturing and extrapolating early results of 2016 innovations in preparation of the 2018-2020 NFM concept note (also see section 8.2), with TA from the London School of Hygiene and Tropical Medicins and KCNV. For long term capacity building in modeling country staff will be trained in use and adaptation of the TIME model at the LSHTM. Beside that, CTB will invest in assurance of data quality during the upcoming DRS and inventory study

Strengthen the local OR capacity by inclusion of public health research institutes in the research network activities (epi training, including support to protocol development, mentoring of study implementation, analysis and international publications by local PIs) (see list of possible study questions).

OR ICF: A study will be conducted (the protocol was developed under APA2) on intensified case finding in Kab Bogor (screening of Puskesmas visitors will be evaluated to identify the most effective combination of risk factors to identify people eligible for further testing (e.g. the elderly etc.) and the most effective and feasible diagnostic algorithm for ICF in health facilities. In ICF settings, digital X-ray with CAD4TB will be piloted to inform national policies for wider application in Indonesia. (IRD/KNCV/WHO).

Sub-objective 11: Human resource development

- 11.1 Qualified staff available and supportive supervisory systems in place

CTB will support the development and implementation of the national HR development framework (MOH), following initial work during Q4 of APA2 (assessment of legislation, HR availability etc.), by provision of international and local TA with a focus on national and provincial level HR development planning (provincial and districts level implementation like TOTs will depend on district plans). Besides that, CTB will support on strategic restructuring of task/competency based training packages for all target groups. CTB will encourage and facilitate TB staff from all levels to present their best practices in publications and support participation of staff with good examples of this in national conferences.Staff with outstanding presentations may be facilitated to participate in international forum meetings to present and disseminate their work.

CTB will facilitated the training to establish a new team of 20 national master trainers (following revision of the masters training module)

Annex I: Year 2 Results on Mandatory Indicators as well as National Data on the Number of pre-/XDR-TB Cases Started on Bedaquiline or Delamanid

MANDATORY Indicators				
2.1.2 A current national TB laboratory operational plan exists and is used to prioritize, plan and implement interventions.	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Score as of September 30, 2016	1	N/A	**Substantial**	CTB provided TA and external consultants in developing National TB Laboratory Plan 2015-2019. Draft has been finalized and submitted to NTP in February 2016.
2.2.6 Number and percent of TB reference laboratories (national and intermediate) within the country implementing a TB-specific quality improvement program i.e. Laboratory Quality Management System	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Number and percent as of September 30, 2016	0	N/A	**Moderate**	LQMS training for NRLs will be conducted in APA3. The 3 NRLs are: 1. Microbiology UI: NRL for Molecular 2. BBLK Surabaya: NRL for C/DST 3. BBLK Bandung: NRL for Microscopy
2.2.7 Number of GLI-approved TB microscopy network standards met	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Number of standards met as of September 30, 2016	7	N/A	**Moderate**	The 7 standards that are met: 1,2,3,4,6,9,11
2.3.1 Percent of bacteriologically confirmed TB cases who are tested for drug resistance with a recorded result.	**National 2015**	**CTB 2015**	**CTB APA 2 investment**	**Additional Information/Comments**
Percent (new cases), include numerator/denominator	0.41% (772/188,300)	2% (334/19,816)	**Substantial**	At the moment, recording and reporting that accommodates this indicator is not yet available. The Recording and
Percent (previously treated cases),	87% (7,655/8,772)	119% (1,816/1,525)		

include numerator/denominator				Reporting for sensitive-TB and RR/MDR-TB is in different platform. The data that is reported comes from eTB manager for the numerator and SITT for the denominator. The numerator data may not part of the denominator data. NTP is developing information system that integrates sensitive-TB and RR/MDR-TB. Data CTB was reported from 10 CTB districts.
Percent (total cases), include numerator/denominator	4% (8,427/19,7072)	10% (2,150/21,341)		
3.1.1. Number and percent of cases notified by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e. gender, children, miners, urban slums, etc.) and/or case finding approach	**National APA2**	**CTB APA2**	**CTB APA 2 investment**	**Additional Information/Comments**
Number and percent	*Fill in data in "Ind 3.1.1 - APA 2" worksheet*	*Fill in data in "Ind 3.1.1 - APA 2" worksheet*		
3.1.4. Number of RR-TB or MDR-TB cases notified	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Total 2015	1859	1214	**Substantial**	It is including RR-TB. Data CTB APA2 reported from 5 CTB provinces. Sources: ETB Manager, 10 October 2016
Jan-Mar 2016	436	259		
Apr-June 2016	415	243		
Jul-Sept 2016	446	329		
To date in 2016	1297	831		
3.2.1. Number and percent of TB cases successfully treated (all forms) by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (i.e. gender, children, miners, urban slums, etc.).	**National 2014 cohort**	**CTB 2014 cohort**	**CTB APA 2 investment**	**Additional Information/Comments**
Number and percent of TB cases successfully treated in a calendar year cohort	Getting from WHO	81% (33,369/41,068) (10 districts)	**Substantial**	Disaggregated data is not available due to limited regular recording and reporting
3.2.4. Number of patients started	**National**	**CTB APA 2**	**CTB APA 2**	**Additional Information/Comments**

on MDR-TB treatment	**APA 2**		**investment**	
Total 2015	1250	1117	**Substantial**	It is including RR-TB. Data CTB APA2 reported from 5 CTB provinces. Sources: ETB Manager, 4 October 2016 Sources of national data is ETB Manager, 10 October 2016
Jan-Mar 2016	265	338		
Apr-June 2016	230	293		
Jul-Sept 2016	207	258		
To date in 2016	702	889		
3.2.7. Number and percent of MDR-TB cases successfully treated	**National 2013 cohort**	**CTB 2013 cohort**	**CTB APA 2 investment**	**Additional Information/Comments**
Number and percent of MDR-TB cases successfully treated in a calendar year cohort	Getting from WHO	51% (358/702)	**Substantial**	Data reported from 5 CTB provinces. Sources: ETB Manager, 4 October 2016
5.2.3. Number and % of health care workers diagnosed with TB during reporting period	**National 2015**	**CTB 2015**	**CTB APA 2 investment**	**Additional Information/Comments**
Number and percent reported annually	U	U	**Moderate**	Annual assessment is done to evaluate implementation in selected hospitals (usually government owned, high-volume, teaching hospital, providing TB or HIV services). TB results are confidential (HRM eyes only) and does not enter the surveillance system.
6.1.11. Number of children under the age of 5 years who initiate IPT	**National 2015**	**CTB 2015**	**CTB APA 2 investment**	**Additional Information/Comments**
Number reported annually	U	U	**Moderate**	IPT for children has been implemented in country but surveillance system for this program is not established yet.
7.2.3. % of activity budget covered by private sector cost share, by specific activity	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Percent as of September 30, 2016 (include numerator/denominator)	N/A	N/A	**None**	No CTB activities in APA2 covered by private sector cost share
8.1.3. Status of National Stop TB Partnerships	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Score as of September 30, 2016		N/A	**None**	This data will be updated after STOP TB Partnership Indonesia (STPI) submit the response to the questionnaire
8.1.4. % of local partners' operating budget covered by diverse non-USG funding sources	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Percent as of September 30, 2016	N/A	N/A	**None**	No local partner in CTB APA2

(include numerator/denominator)				
8.2.1. Global Fund grant rating	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Score as of September 30, 2016	PR 1 (MoH): B1 PR 2 (Aisyiyah):	N/A	**Substantial**	Global Fund grand rating is available for July-Dec 2015 period. Rating for Jan-Jun 2016 is under review by LFA.
9.1.1. Number of stock outs of anti-TB drugs, by type (first and second line) and level (ex, national, provincial, district)	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Number as of September 30, 2016	**First Line:** Cat 1: 6 districts Cat 2: 59 districts TB drugs for children: 108 districts	**First Line**: Cat 1: 0 districts Cat 2: 1 districts TB drugs for children: 0 districts	**None**	Stock of anti TB drugs is reported quarterly. Latest data available is April-June 2016. Data CTB available only in 7 districts (Jember, Tulungagung, East Jakarta, Bandung City, Bogor, Deli Serdang, Medan City)
10.1.4. Status of electronic recording and reporting system	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Score as of September 30, 2016	3	N/A	**Substantial**	Either SITT or eTB (web based-recording and reporting system) have been implemented in all provinces. However, they are not real time yet.
10.2.1. Standards and benchmarks to certify surveillance systems and vital registration for direct measurement of TB burden have been implemented	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Yes or No as of September 30, 2016	No	N/A	**None**	The standards and benchmarks for surveillance previously conducted by external consultants from WHO HQ during JEMM 2013. The next Standard and Benchmark assessment will be conducted during JEMM -January 2017.
10.2.6. % of operations research project funding provided to local partner (provide % for each OR project)	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**

Percent as of September 30, 2016 (include numerator/denominator)	N/A	N/A	**Moderate**	
10.2.7. Operational research findings are used to change policy or practices (ex, change guidelines or implementation approach)	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Yes or No as of September 30, 2016	N/A	N/A		OR was not yet completed
11.1.3. Number of health care workers trained, by gender and technical area	**CTB APA 2**		**CTB APA 2 investment**	**Additional Information/Comments**
			Substantial	
	# trained males APA 2	**# trained females APA 2**	**Total # trained in APA 2**	**Total # planned trainees in APA 2**
1. Enabling environment	**36**	**84**	**120**	
2. Comprehensive, high quality diagnostics	**86**	**155**	**241**	
3. Patient-centered care and treatment	**45**	**106**	**151**	
7. Political commitment and leadership			**0**	
8. Comprehensive partnerships and informed community involvement			**0**	
9. Drug and commodity management systems			**0**	
10. Quality data, surveillance and M&E	**153**	**133**	**286**	
11. Human resource development			**0**	
Grand Total	**320**	**478**	**798**	**0**
11.1.5. % of USAID TB funding directed to local partners	**National APA 2**	**CTB APA 2**	**CTB APA 2 investment**	**Additional Information/Comments**
Percent as of September 30, 2016 (include numerator/denominator)	N/A	N/A	**None**	No local partner in CTB APA2

Year/Quarter	**Number of pre-/XDR-TB cases started on BDQ nationwide**	**Number of pre-/XDR-TB cases started on DLM nationwide**	**CTB APA 2 investment**	**Additional Information/Comments**
Total 2014	0	0	**Moderate**	Delamanid is not yet used in Indonesia
Total 2015	17	0		
Jan-Mar 2016	8	0		
Apr-Jun 2016	13	0		
Jul-Sept 2016	6	0		
To date in 2016	27	0		

Annex II: Status of EMMP activities

Year 2 Mitigation Measures	Status of Mitigation Measures	Outstanding issues to address in Year 3	Additional Remarks
1. CTB will ensure proper procurement and distribution/ placement of new GeneXpert machines to selected intermediate reference labs.	- CTB provided TA to simplify assessment tools to be used by DHO to assess laboratories for GeneXpert placement purpose. This tools included waste management as component to be assessed.	- due to big amount of GeneXpert machines to be placed (>200 machines), time and man power limitation, the assesment process has lack of control.	
2. CTB will advise the NTP on the proper storage based on the information provided on the manufacturer's Materials Safety Data Sheet as well as in line with WHO's Safe Management of Waste from Health-care Activities (http://www.who.int/water_sanitation_health/medicalwaste/wastemanag/en/).	- During APA2, either CTB or NRL did not conduct routine supervision. CTB could not conduct supervision due to legal issue which interfered implementation of workplan. In the other hand, NRL which was funded by Global Fund grant, not yet appointed as SSR due to restructuration in MoH.		
3. CTB will also advise the NTP to follow the Technical Guidelines for Packaging, Delivery and Receipt Specimen TB and Logistics Laboratory for proper packaging, delivery and receipt of all public health commodities other than pharmaceutical drugs.	- CTB facilitated NTP to develop DVD that explain step by step specimen transport packaging based on the technical guideline. In every training, NTP always distribute this DVD to participants. -CTB actively involved in developing technical guideline on specimen transport by NTP with support from JSI.		
4. While the GeneXpert arrived on the selected sites, CTB will ensure the installation and operational of Xpert machine is proper, by providing TA and on the job training to lab staff. Although the responsibility for proper storage lies on Xpert site by Laboratory Biosafety Team but CTB will provide	- CTB actively involved in instalation process and training on operational of GeneXpert machines, including ensure the installation and operational of Xpert machine is proper - regular supervision: refer to no 2		

assistance to those Xpert sites, conduct regular supervision with NTP.			
5. CTB will ensure the panel test packaging and shipment from NRL-C/DST to certified DST Labs and uncertified DST Labs is done properly based on SOP of Isolates Transportation (IATA - International Air Transport Association).	-CTB in collaboration with SRL has trained NRLs on the panel test packaging and shipment based on IATA - International Air Transport Association.		
6. For used Xpert cartridges, CTB will ensure this infectious waste is managed/disposed properly in line with the national guidelines for Xpert implementation.	Waste management is included in the training material for training on the operation of GeneXpert machines (refer to no.4)		
7. For health facilities being supported by CTB, the project will obtain the country's non-medical and medical waste management regulations and procedures. CTB will support training in clinical waste management and ensure that it is integrated into training programs and NTP guidelines. Training material will align with the national regulations and procedures for medical waste (The Indonesian Environmental Impact Management Agency (*BAPEDAL)*).	- CTB facilitated Safety Working Practice training for NRLs. The training material that was used is in line with international standard. At this moment, NRLs are able to conduct SWP training. -Besides, CTB provided TA to develop technical guideline on safety and security work at Tuberculosis Laboratory.		
8. During supportive supervision visits, management and disposal of medical waste will be discussed and checked; when necessary corrections will be made.	Refer to no 2		
9. Biosafety cabinets will be maintained and calibrated regularly (often by a contracted company).	-During APA2. CTB could not facilitate this activities due to legal issue (refer to no. 2). -CTB encouraged laboratories to propose budget for maintenance and calibration for biosafety cabinet from local budget.		
10. The Healthcare Waste Management Minimum Program Checklist and Action Plan will be completed by all health facilities being supported by Challenge TB. Responsible staff will be trained on how to use this tool to assess the status of and improve waste management practices.	- This activities were not yet conducted due to other priority	It is proposed in APA3 workplan to develop a leaflet on safety and security in TB laboratories to support the implementation of the guideline (refer to no. 7)	